



6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R09-OAR-2020-0425; FRL-10015-07-Region 9]

Approval of Air Quality Implementation Plans; California; Sacramento Metro Area; 2008

8-Hour Ozone Nonattainment Area Requirements

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve, or conditionally approve, all or portions of two state implementation plan (SIP) revisions submitted by California to meet Clean Air Act (CAA or “Act”) requirements for the 2008 8-hour ozone national ambient air quality standards (NAAQS or “standards”) in the Sacramento Metro ozone nonattainment area. These SIP revisions include the “Sacramento Regional 2008 NAAQS 8-hour Attainment and Reasonable Further Progress Plan” and the Sacramento Metro portion of the “2018 Updates to the California State Implementation Plan.” Collectively, the EPA refers to these submittals as the “Sacramento Metro Area Ozone SIP.” The Sacramento Metro Area Ozone SIP addresses the CAA nonattainment area requirements for the 2008 ozone NAAQS, such as the requirements for an emissions inventory, an attainment demonstration, reasonable further progress, reasonably available control measures, and contingency measures, and it establishes motor vehicle emissions budgets. The EPA is proposing to approve the Sacramento Metro Area Ozone SIP as meeting all the applicable ozone nonattainment area requirements, except for the contingency measure requirement where the EPA is proposing a conditional

approval. Also, the EPA is beginning the adequacy process for the 2023 and 2024 motor vehicle emissions budgets in the Sacramento Metro Area Ozone SIP via this proposed rule.

DATES: Written comments must arrive on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R09-OAR-2020-0425 at <https://www.regulations.gov>. For comments submitted at Regulations.gov, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the web, cloud, or other file sharing system). For additional submission methods, or if you need assistance in a language other than English or if you are a person with disabilities who needs a reasonable accommodation at no cost to you, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

FOR FURTHER INFORMATION CONTACT: Jerry Wamsley, Air Planning Office (ARD-2), EPA Region IX, 75 Hawthorne Street, San Francisco, CA 94105, (415) 947-4111, or by email at Wamsley.Jerry@epa.gov.

SUPPLEMENTAL INFORMATION: Throughout this document, “we,” “us,” and “our” refer to the EPA.

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I. Regulatory Context

A. Ozone Standards, Area Designations, and SIPs

Ground-level ozone pollution is formed from the reaction of volatile organic compounds (VOC) and oxides of nitrogen (NO_x) in the presence of sunlight.¹ These two pollutants, referred to as ozone precursors, are emitted by many types of sources, including on-and off-road motor

¹ The State of California refers to reactive organic gases (ROG) rather than VOC in some of its ozone-related SIP submissions. As a practical matter, ROG and VOC refer to the same set of chemical constituents, and for the sake of simplicity, we refer to this set of gases as VOC in this proposed rule.

vehicles and engines, power plants and industrial facilities, and smaller area sources such as lawn and garden equipment and paints. Scientific evidence indicates that adverse public health effects occur following exposure to ozone, particularly in children and adults with lung disease.

Breathing air containing ozone can reduce lung function and inflame airways, which can increase respiratory symptoms and aggravate asthma or other lung diseases.²

In 1979, under section 109 of the CAA, the EPA established primary and secondary national ambient air quality standards for ozone at 0.12 parts per million (ppm) averaged over a 1-hour period (“1-hour ozone standard”).³

With the CAA Amendments of 1990, the Sacramento Metro ozone nonattainment area (“Sacramento Metro Area”) was designated as “Serious” for the 1979 1-hour ozone standard and was required to submit an attainment plan designed to meet this NAAQS by 1999. The California Air Resources Board (CARB) submitted such an attainment plan to the EPA on November 15, 1994, and we approved this attainment plan on January 8, 1997.⁴ When subsequent air quality modeling studies from the State showed that the control strategy in the 1994 attainment plan would not meet the 1-hour ozone standard, the State requested and the EPA approved a voluntary reclassification from Serious to “Severe-15.”⁵ This reclassification extended the deadline for attaining the 1-hour ozone standard from 1999 to November 2005.

² “Fact Sheet – 2008 Final Revisions to the National Ambient Air Quality Standards for Ozone” dated March 2008.

³ 44 FR 8202 (February 8, 1979).

⁴ 62 FR 1150 (January 8, 1997).

⁵ 60 FR 20237 (April 25, 1995).

Based on the air quality data collected from 2007 through 2009, the EPA determined that the Sacramento Metro Area met the 1979 1-hour ozone standard on October 18, 2012.⁶

On July 18, 1997, the EPA revised the primary and secondary NAAQS for ozone to set the acceptable level of ozone in the ambient air at 0.08 ppm, averaged over an 8-hour period (“1997 8-hour ozone standard”).⁷ The EPA set the 1997 8-hour ozone standard based on scientific evidence demonstrating that ozone causes adverse health effects at lower concentrations and over longer periods of time than was understood when the previous 1-hour ozone standard was set. The EPA determined that the 1997 8-hour standard would be more protective of human health, especially children and adults who are active outdoors, and individuals with a pre-existing respiratory disease, such as asthma.

In 2004, the Sacramento Metro Area was designated as nonattainment for the 1997 8-hour ozone standard and classified as Serious.⁸ Subsequently, CARB requested that the EPA reclassify the Sacramento Metro Area, under CAA section 181(b)(3), from Serious to “Severe-15.”⁹ The EPA then finalized the reclassification of the Sacramento Metro Area to Severe-15 on May 5, 2010.¹⁰ The State and local air districts developed an attainment plan, along with state-wide and local control measures, for the 1997 8-hour ozone standard and submitted the plan and

⁶ 77 FR 64036 (October 18, 2012).

⁷ 62 FR 38856 (July 18, 1997).

⁸ 69 FR 23858 (April 30, 2004).

⁹ Letter dated February 14, 2008, from James N. Goldstene, Executive Officer, CARB, to Wayne Nastri, Regional Administrator, EPA Region IX.

¹⁰ 75 FR 24409 (May 5, 2010).

related components to the EPA over the course of several years from 2006 to 2013.¹¹ The EPA approved the “Sacramento 8-Hour Ozone Attainment Plan” on January 29, 2015.¹²

On March 27, 2008, the EPA revised and further strengthened the primary and secondary NAAQS for ozone by setting the acceptable level of ozone in the ambient air at 0.075 ppm, averaged over an 8-hour period (“2008 8-hour ozone standard”).¹³ On May 21, 2012, we designated nonattainment areas for the 2008 8-hour ozone NAAQS.¹⁴ At the same time, we assigned classifications to many of these areas based upon their ozone design value, in accordance with the structure of part D, subpart 2 of Title I of the CAA.¹⁵ We designated the Sacramento Metro Area as nonattainment for the 2008 ozone standards, and at the request of CARB retained the Severe-15 classification, consistent with previous ozone NAAQS.¹⁶ The Sacramento Metro Area’s outermost attainment date for the 2008 8-hour ozone standard is as expeditious as practicable but no later than July 20, 2027. As a practical matter, the Sacramento Metro Area would be required to demonstrate attainment of the 2008 NAAQS no later than the previous ozone season, 2026. As discussed further below, the EPA has determined that expeditious attainment for the Sacramento Metro Area can be achieved in 2024. Accordingly, the

¹¹ See Table 4 of our proposed rule for a listing of state and local submittals composing the attainment plan for the 1997 8-hour ozone standard; 79 FR 61803 (October 15, 2014).

¹² 80 FR 4795 (January 29, 2015). Please see our proposed rule for this final action for a complete description of the attainment plan and state and local control measures; 79 FR 61799 (October 15, 2014).

¹³ 73 FR 16436 (March 27, 2008).

¹⁴ 77 FR 30088 (May 21, 2012) and 40 CFR 81.330.

¹⁵ 69 FR 23858 (April 30, 2004) and 40 CFR 51.903(a). The designations and classifications for the 2008 8-hour ozone standard for California nonattainment areas are codified at 40 CFR 81.305. A design value is an ambient concentration calculated using a specific methodology to evaluate monitored air quality data and is used to determine whether an area’s air quality is meeting a NAAQS. The methodology for calculating design values for the 8-hour ozone NAAQS is found in 40 CFR part 50, Appendix I.

¹⁶ 77 FR 30088 (May 21, 2012).

effective attainment date for the area is December 31, 2024.

B. The Sacramento Metro Ozone Nonattainment Area

The Sacramento Metro Area consists of Sacramento and Yolo counties and portions of El Dorado, Placer, Solano and Sutter counties.¹⁷ Several local air agencies have jurisdiction in this area. Sacramento County is under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). Yolo County and the eastern portion of Solano County comprise the Yolo-Solano AQMD (YSAQMD). The southern portion of Sutter County is part of the Feather River AQMD (FRAQMD). The western portion of Placer County is part of the Placer County Air Pollution Control District (PCAPCD). Lastly, the western portion of El Dorado County is part of the El Dorado County AQMD (EDCAQMD). In this action, we refer to these five districts collectively as the “Districts.” Under California law, each air district is responsible for adopting and implementing stationary source rules, while CARB adopts and implements consumer products and mobile source rules. The Districts’ and State’s rules are submitted to the EPA by CARB.

Current ambient 8-hour ozone levels in the Sacramento Metro Area are well above the 2008 8-hour ozone NAAQS. For the 2014-2016 period, the design value for the area, based on monitored readings at the Placerville monitor in El Dorado County, is 0.085 ppm. Since 2010, the highest design values have been found at the Folsom monitor in Sacramento County and the

¹⁷ For a precise description of the geographic boundaries of the Sacramento Metro Area for the 2008 ozone standards, see 40 CFR 81.305. Specifically included portions are the eastern portion of Solano County, the western portions of Placer and El Dorado counties outside of the Lake Tahoe Basin, and the southern portion of Sutter County.

Placerville monitor in El Dorado County, ranging from 0.085 ppm to 0.102 ppm.¹⁸

C. CAA and Regulatory Requirements for 2008 Ozone Nonattainment Area SIPs

States must implement the 2008 ozone NAAQS under Title 1, part D of the CAA, including sections 171-179B of subpart 1 (“Nonattainment Areas in General”) and sections 181-185 of subpart 2 (“Additional Provisions for Ozone Nonattainment Areas”). To assist states in developing effective plans to address ozone nonattainment problems, in 2015, the EPA issued a SIP Requirements Rule (SRR) for the 2008 ozone NAAQS (“2008 Ozone SRR”) that addressed implementation of the 2008 standards, including attainment dates, requirements for emissions inventories, attainment and reasonable further progress (RFP) demonstrations, among other SIP elements, as well as the transition from the 1997 ozone NAAQS to the 2008 ozone NAAQS and associated anti-backsliding requirements.¹⁹ The 2008 Ozone SRR is codified at 40 CFR part 51, subpart AA. In section III below, we discuss in more detail the CAA and regulatory requirements for the air quality plans required to meet the 2008 ozone standard.

The EPA’s 2008 Ozone SRR was challenged, and on February 16, 2018, the U.S. Court of Appeals for the D.C. Circuit (“D.C. Circuit”) published its decision in *South Coast Air Quality Management District v. EPA* (“*South Coast II*”)²⁰ vacating portions of the 2008 Ozone SRR. The only aspect of the *South Coast II* decision that affects this proposed action is the vacatur of the alternative baseline year for RFP plans. More specifically, the 2008 Ozone SRR required

¹⁸ Sacramento Regional 2008 NAAQS 8-hour Attainment and Reasonable Further Progress Plan, Table 4-2.

¹⁹ 80 FR 12264 (March 6, 2015).

²⁰ *South Coast Air Quality Management District v. EPA*, 882 F.3d 1138 (D.C. Cir. 2018). The term “*South Coast II*” is used in reference to the 2018 court decision to distinguish it from a decision published in 2006 also referred to as “*South Coast*.” The earlier decision involved a challenge to the EPA’s Phase 1 implementation rule for the 1997 ozone NAAQS. *South Coast Air Quality Management Dist. v. EPA*, 472 F.3d 882 (D.C. Cir. 2006).

states to develop the baseline emissions inventory for RFP plans using the emissions for the most recent calendar year for which states submit a triennial inventory to the EPA under subpart A (“Air Emissions Reporting Requirements”) of 40 CFR part 51, which was 2011. The 2008 Ozone SRR, however, allowed states to use an alternative year, between 2008 and 2012, for the baseline emissions inventory provided that the state demonstrated why the alternative baseline year was appropriate. In the *South Coast II* decision, the D.C. Circuit vacated the provisions of the 2008 Ozone SRR that allowed states to use an alternative baseline year for demonstrating RFP.

II. Submissions from the State of California to Address 2008 Ozone Standard Requirements in the Sacramento Metro Area

A. Summary of Submissions

The EPA’s designation of an area as nonattainment for a NAAQS starts the process for a state to develop and submit to the EPA a plan providing for attainment of the given NAAQS under title 1, part D of the CAA. For 8-hour ozone areas designated as nonattainment under the 2008 ozone NAAQS, effective July 20, 2012, the Sacramento Metro Area’s attainment plan was due by July 20, 2016.²¹ The State did not meet this July 20, 2016 deadline to submit an attainment plan and the EPA issued a finding of failure to submit an attainment SIP and several of its required elements on September 26, 2017.²² This finding of failure to submit an attainment plan and other required elements was addressed by the submittals discussed below.

²¹ 40 CFR 51.1108(b) and 40 CFR 51.1110.

²² 82 FR 44736 (September 26, 2017), effective on October 26, 2017.

California has submitted two SIP revisions to address the Sacramento Metro Area's CAA planning obligations for attaining the 2008 8-hour ozone standard. The principal submittals are as follows:

- "Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment Plan and Reasonable Further Progress Plan," dated July 25, 2017 ("2017 Sacramento Regional Ozone Plan" or "Plan"); and
- The Sacramento Metro portion of CARB's "2018 Updates to the California State Implementation Plan" ("2018 SIP Update").

In this document, we are proposing action on all or portions of these SIP revisions, which are summarized below. Collectively, we refer to the relevant portions of these SIP revisions as the "Sacramento Metro Area Ozone SIP."

1. 2017 Sacramento Regional Ozone Plan

On December 18, 2017, CARB submitted the 2017 Sacramento Regional Ozone Plan to the EPA as a revision to the California SIP.²³ The 2017 Sacramento Regional Ozone Plan addresses the nonattainment area requirements for the Sacramento Metro Area concerning the 2008 ozone NAAQS. The SIP revision for the 2017 Sacramento Regional Ozone Plan includes the Plan itself with its chapters and appendices, plus the Districts' resolutions of adoption for the plan, and CARB's resolution of adoption for the 2017 Sacramento Regional Ozone Plan. The 2017 Sacramento Regional Ozone Plan was adopted by the Districts' governing boards

²³ Letter dated December 18, 2017, from Richard Corey, Executive Officer, CARB, to Alexis Strauss, Acting Regional Administrator, EPA Region IX.

beginning in late August through October 2017, and then by CARB, via Resolution 17-40, on November 16, 2017. See table 1 for the Districts' adoption dates and board resolution or order numbers.

Table 1 - Districts and Adoption Dates for 2017 Sacramento Regional Ozone Plan		
District	Hearing and Adoption Dates	Board Resolution/Order
SMAQMD	August 24, 2017	2017-015
EDCAQMD	September 12, 2017	141-2017
FRAQMD	October 2, 2017	2017-10
YSAQMD	October 11, 2017	17-06
PCAPCD	October 12, 2017	17-08

The 2017 Sacramento Regional Ozone Plan is organized into thirteen chapters and six technical appendices addressing the CAA requirements for VOC and NO_x emissions inventories, air quality and photochemical modeling to demonstrate attainment of the 2008 ozone standard, reasonably available control measures (RACM) for each of the Districts along with the overall control strategy for the Sacramento Metro Area, RFP, adoption and implementation of transportation control strategies and measures, and contingency measures for failure to meet RFP or attain, among other requirements. Submittal of the 2017 Sacramento Regional Ozone Plan and the EPA's completeness determination for the Plan set aside our September 26, 2017 finding of failure to submit.²⁴ In addition to the 2017 Sacramento Regional Ozone Plan, CARB submitted its Staff Report reviewing the plan and discussing the photochemical modeling supporting its attainment demonstration and referred to herein as the "CARB Staff Report."²⁵

2. 2018 SIP Update

²⁴ Letter dated June 14, 2018, from Elizabeth Adams, Acting Director, Air Division, EPA Region IX, to Richard Corey, Executive Officer, CARB.

²⁵ "Staff Report, ARB Review of the Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan" ("CARB Staff Report"), release date October 13, 2017.

On December 5, 2018, CARB submitted the 2018 SIP Update to the EPA as a revision to the California SIP.²⁶ CARB developed the 2018 SIP Update in response to the court's decision in *South Coast II* vacating the 2008 Ozone SRR with respect to the use of an alternate baseline year for demonstrating RFP and to address contingency measure requirements in the wake of the court decision in *Bahr v. EPA*.²⁷ The 2018 SIP Update includes an RFP demonstration using the required 2011 baseline year for the Sacramento Metro Area for the 2008 ozone NAAQS. The 2018 SIP Update also includes updated motor vehicle emission budgets and information to support the contingency measure element of the 2017 Sacramento Regional Ozone Plan. The 2018 SIP Update includes updates for 8 different California ozone nonattainment areas. We have already acted to approve portions of the 2018 SIP Update related to other nonattainment areas.²⁸ In this action, we are proposing action on the Sacramento Metropolitan Area portion of the 2018 SIP Update, specifically, Section V – SIP Elements for the Sacramento Metropolitan Area.

To supplement the contingency measure element of the 2017 Sacramento Regional Ozone Plan, in a letter dated July 7, 2020, CARB forwarded to the EPA a May 26, 2020 letter of commitment from the Districts.²⁹ In this letter, the Districts commit to modify their existing architectural coatings rules, and the SMAQMD also commits to adopt a VOC rule that would

²⁶ Letter dated December 5, 2018, from Richard Corey, Executive Officer, CARB, to Mike Stoker, Regional Administrator, EPA Region IX. CARB adopted the 2018 SIP Update on October 25, 2018.

²⁷ *Bahr v. EPA*, 836 F.3d 1218 (9th Cir. 2016) (“*Bahr v. EPA*”). In *Bahr v. EPA*, the court rejected the EPA's longstanding interpretation of CAA section 172(c)(9) as allowing for early implementation of contingency measures. The court concluded that a contingency measure must take effect at the time the area fails to make RFP or attain by the applicable attainment date, not before.

²⁸ See, e.g., 84 FR 11198 (March 25, 2019) (final approval of the San Joaquin Valley portion of the 2018 SIP Update), 84 FR 52005 (October 1, 2019) (final approval of the South Coast portion of the 2018 SIP Update), and 85 FR 38081 (June 25, 2020) (final approval of the Ventura County portion of the 2018 SIP Update).

²⁹ Letter dated July 7, 2020, from Richard Corey, Executive Officer, CARB, to John Busterud, Regional Administrator, EPA Region IX.

serve as contingency measures that will be triggered if the area fails to meet an RFP milestone or fails to attain the 2008 ozone NAAQS.³⁰ In the July 7, 2020 letter, CARB commits to submit the Districts' revised rules to the EPA as a SIP revision within 12 months of the EPA's final conditional approval of the contingency measures element of the Sacramento Metro Area Ozone SIP.³¹

B. Clean Air Act Procedural Requirements for Adoption and Submission of SIP Revisions

CAA sections 110(a) and 110(l) require a state to provide reasonable public notice and opportunity for public hearing prior to the adoption and submission of a SIP or SIP revision. To meet this requirement, every SIP submittal should include evidence that adequate public notice was given and an opportunity for a public hearing was provided consistent with the EPA's implementing regulations in 40 CFR 51.102.

The Districts, collectively, and CARB have satisfied the applicable statutory and regulatory requirements for reasonable public notice and hearing prior to the adoption and submittal of the SIP revisions that comprise the Sacramento Metro Area Ozone SIP. With respect to the 2017 Sacramento Regional Ozone Plan, the Districts held hearings prior to adoption to discuss the plan and solicit public input. Prior to these adoption hearings, the Districts published notices of public hearing for the adoption of the 2017 Sacramento Regional Ozone Plan in local

³⁰ Letter dated May 26, 2020, from the Districts' respective Executive Officer or Air Pollution Control Officer, Alberto Ayala-SMAQMD, Dave Johnston-EDCAQMD, Christopher Brown-FRAQMD, Erik White-PCAPCD, Mat Ehrhardt-YSAQMD to Richard Corey, Executive Officer, CARB.

³¹ Letter dated July 7, 2020, from Richard Corey, Executive Officer, CARB, to John Busterud, Regional Administrator, EPA Region IX.

newspapers within the Districts.³² As noted in table 1 above, the Districts adopted the 2017 Sacramento Regional Ozone Plan and each directed their respective Executive Officer or Air Pollution Control Officer to forward the plan to CARB for inclusion in the California SIP.

CARB also provided public notice and opportunity for public comment on the 2017 Sacramento Regional Ozone Plan. On October 12, 2017, CARB released for public review its Staff Report for the 2017 Sacramento Regional Ozone Plan and published a notice of public meeting to be held on November 16, 2017, to consider adoption of the 2017 Sacramento Regional Ozone Plan.³³ On November 16, 2017, CARB held the public hearing and adopted the 2017 Sacramento Regional Ozone Plan as a revision to the California SIP, and directed the Executive Officer to submit the 2017 Sacramento Regional Ozone Plan to the EPA for approval into the California SIP.³⁴ On December 18, 2017, the Executive Officer of CARB submitted the 2017 Sacramento Regional Ozone Plan to the EPA and included the transcript of the hearing held on November 16, 2017.³⁵ On June 14, 2018, the EPA determined that this submittal addressing the 2008 ozone NAAQS was complete.³⁶

With respect to the 2018 SIP Update, CARB also provided public notice and opportunity for public comment. On September 21, 2018, CARB released for public review the 2018 SIP

³² Please refer to the EPA's Completeness Determination and supporting information included in the docket for this proposal concerning the specific notices of public hearing, their evidence of publication in local newspapers, and the Districts' public hearings.

³³ "Notice of Public Meeting to Consider the Ozone State Implementation Plan for the Sacramento Nonattainment Region," signed by Richard W. Corey, CARB Executive Officer, October 12, 2017. The Notice was made available on CARB's website.

³⁴ CARB Resolution 17-40.

³⁵ Compilation of Public Comments and Response for the November 16, 2017 Meeting of the State of California Air Resources Board.

³⁶ Letter dated June 14, 2018, from Elizabeth Adams, Acting Director, Air Division, EPA Region IX to Richard Corey, Executive Officer, CARB.

Update and published a notice of a public meeting to be held on October 23, 2018, to consider adoption of the 2018 SIP Update.³⁷ On October 23, 2018, through Resolution 18-50, CARB adopted the 2018 SIP Update. On December 5, 2018, CARB submitted the 2018 SIP Update to the EPA.

Based on information provided in each of the SIP revisions summarized above, the EPA has determined that all hearings were properly noticed. Therefore, we find that the submittals of the 2017 Sacramento Regional Ozone Plan and the 2018 SIP Update meet the procedural requirements for public notice and hearing in CAA sections 110(a) and 110(l) and 40 CFR 51.102.

III. Evaluation of the Sacramento Metro Area Ozone SIP

A. Emissions Inventories

1. Statutory and Regulatory Requirements

CAA sections 172(c)(3) and 182(a)(1) require states to submit for each ozone nonattainment area a “base year inventory” that is a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants in the area. In addition, the 2008 Ozone SRR requires that the inventory year be selected consistent with the baseline year for the RFP demonstration, which is the most recent calendar year for which a complete triennial inventory is required to be submitted to the EPA under the Air Emissions Reporting Requirements.³⁸

³⁷ Notice of Public Meeting to Consider the 2018 Updates to the California State Implementation Plan signed by Richard Corey, Executive Officer, CARB, September 21, 2018.

³⁸ 2008 Ozone SRR at 40 CFR 51.1115(a) and the Air Emissions Reporting Requirements at 40 CFR part 51 subpart A.

The EPA has issued guidance on the development of base year and future year emissions inventories for 8-hour ozone and other pollutants.³⁹ Emissions inventories for ozone must include emissions of VOC and NO_x and represent emissions for a typical ozone season weekday.⁴⁰ States should include documentation explaining how the emissions data were calculated. When estimating mobile source emissions, states should use the latest emissions models and planning assumptions available at the time the SIP is developed.⁴¹

Future baseline emissions inventories must reflect the most recent population, employment, travel and congestion estimates for the area. In this context, “baseline” emissions inventories refer to emissions estimates for a given year and area that reflect rules and regulations and other measures that are already adopted. Future baseline emissions inventories are necessary to show the projected effectiveness of SIP control measures. Both the base year and future year inventories are necessary for photochemical modeling to demonstrate attainment.

2. Summary of State’s Submission

The 2017 Sacramento Regional Ozone Plan includes base year (2012) and future year baseline inventories for NO_x and VOC for the Sacramento Metro Area. Documentation for the inventories is found in Chapter 5 (“Emissions Inventory”) and Appendix A (“Emission

³⁹ “Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations,” EPA-454/B-17-002, May 2017. At the time the 2017 Sacramento Regional Ozone Plan was developed, the following EPA emissions inventory guidance applied: “Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations” EPA-454-R-05-001, August 2005.

⁴⁰ 40 CFR 51.1115(a) and (c), and 40 CFR 51.1100(bb) and (cc).

⁴¹ 80 FR 12264, 12290 (March 6, 2015).

Inventory”) of the 2017 Sacramento Regional Ozone Plan.⁴² The emissions inventories represent average summer day emissions, consistent with the observation that ozone levels in the Sacramento Metro Area are typically higher from May through October.

The 2012 base year and future year inventories in the 2017 Sacramento Regional Ozone Plan reflect District and CARB rules adopted prior to the plan in late 2015.⁴³ The plan’s emission reductions are based on continuing implementation of existing federal, state and local control measures. Both base year and projected future year inventories use the most recent EPA-approved version of California’s mobile source emissions model at the time the plan was developed, EMFAC2014, for estimating on-road motor vehicle emissions.⁴⁴

VOC and NO_x emissions estimates in the 2017 Sacramento Regional Ozone Plan are grouped into two general categories, stationary sources and mobile sources. Stationary sources are further divided into “point” and “area” sources. Point sources typically refer to permitted facilities and have one or more identified and fixed pieces of equipment and emissions points. Area sources consist of widespread and numerous smaller emission sources, such as small permitted facilities and households. The mobile sources category is divided into two major

⁴² Appendix A-4 contains detailed source category and emissions inventory projections from CARB’s California Emission Projection Analysis Model. This detailed information is consolidated and presented in Chapter 5 of the plan.

⁴³ 2017 Sacramento Regional Ozone Plan, 5-11 and 7-12 to 7-14.

⁴⁴ 80 FR 77337 (December 14, 2015). EMFAC is short for EMISSION FACTOR. The EPA announced the availability of the EMFAC2014 model for use in state implementation plan development and transportation conformity in California on December 14, 2015. The EPA’s approval of the EMFAC2014 emissions model for SIP and conformity purposes was effective on the date of publication of the notice in the *Federal Register*. EMFAC2014 was the most recently approved version of the EMFAC model that was available at the time of preparation of the 2017 Sacramento Regional Ozone Plan. Recently, the EPA approved an updated version of the EMFAC model, EMFAC2017, for future SIP development and transportation purposes in California; 84 FR 41717 (August 15, 2019).

subcategories, “on-road” and “off-road” mobile sources. On-road mobile sources include light-duty automobiles, light-, medium-, and heavy-duty trucks, and motorcycles. Off-road mobile sources include aircraft, locomotives, construction equipment, mobile equipment, and recreational vehicles.

For the 2017 Sacramento Regional Ozone Plan, point source emissions for the 2012 base year emissions inventory are based on reported data from facilities using the Districts’ annual emissions reporting programs. Area sources include smaller emissions sources distributed across the nonattainment area. CARB and the Districts estimate emissions for area sources using established inventory methods, including publicly available emission factors and activity information. Activity data are derived from national survey data such as the Energy Information Administration or from local sources such as public utilities, paint suppliers, and Districts’ databases. Emission factors used for the estimates come from many sources, such as facility and equipment source tests, compliance reports, and the EPA’s compilation of emissions factors document known as “AP-42.”

CARB calculated the on-road emissions inventories in the 2017 Sacramento Regional Ozone Plan and the 2018 SIP Update using the EMFAC2014 model and the vehicle travel activity data provided by the Sacramento Council of Governments (SACOG) in its “2016 Metropolitan Transportation Plan/Sustainable Communities Strategy” (“2016 MTP/SCS”)⁴⁵ as

⁴⁵ SACOG, “2016 Metropolitan Transportation Plan/Sustainable Communities Strategy,” February 2016. Available at <http://www.sacog.org/general-information/2016-mtpscs>.

updated in the “2017-20 Metropolitan Transportation Improvement Program” (“2017 MTIP”)⁴⁶ and the Metropolitan Transportation Commission (MTC) in its 2012 “Bay Area Plan – Preferred Land Use and Transportation and Investment Strategy.”⁴⁷ CARB provided emissions inventories for off-road equipment, including construction and mining equipment, industrial and commercial equipment, lawn and garden equipment, agricultural equipment, ocean-going vessels, commercial harbor craft, locomotives, cargo handling equipment, pleasure craft, and recreational vehicles. CARB uses several models to estimate emissions for more than one hundred off-road equipment categories.⁴⁸ Aircraft emissions are developed in conjunction with the airports in the region.

Table 2 provides a summary of the Sacramento Metro Area’s 2012 base year, interim, and future attainment year baseline emissions estimates in tons per average summer day for NO_x and VOC. These inventories provide the basis for the control measure analysis and the attainment demonstrations in the 2017 Sacramento Regional Ozone Plan. This emissions inventory includes emissions throughout the Sacramento Metro Area. In the 2012 emissions inventory, stationary and area sources account for roughly 45 percent of VOC emissions and 10 percent of the NO_x emissions in the Sacramento Metro Area while mobile sources account for roughly 55 percent of the VOC emissions and 90 percent of the NO_x emissions. For a more

⁴⁶ SACOG, “2017–20 Metropolitan Transportation Improvement Program,” September 15, 2016, Appendix A-6, “Amendment #1 to the 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy,” available at <https://www.sacog.org/post/2017-20-mtip>.

⁴⁷ 2017 Sacramento Regional Ozone Plan, Sections 10-2 – 10-6. 2018 SIP Update, 31. SACOG is the regional transportation planning agency for the greater Sacramento area and covers Sacramento and Yolo counties, and portions of El Dorado, Placer, and Sutter counties. MTC is the regional transportation planning agency for the San Francisco Bay area, including portions of Solano County within the Sacramento Metro Area.

⁴⁸ 2017 Sacramento Regional Ozone Plan, 5-4.

detailed discussion of the inventories, see Chapter 5 and Appendix A-4 of the 2017 Sacramento Regional Ozone Plan.

Table 2 - Sacramento Metro Area Base Year, Interim, and Attainment Year Baseline Emissions Inventories (summer planning inventory, tons per day (tpd))								
	2012		2018		2021		2024	
Source Category	NO_x	VOC	NO_x	VOC	NO_x	VOC	NO_x	VOC
Stationary Sources	8	22	7	22	7	23	7	23
Area Sources	3	29	2	29	2	30	2	31
On-Road Mobile Sources	61	34	35	20	26	16	19	14
Off-Road Mobile Sources	30	26	26	20	23	18	21	17
Total	101	110	69	91	58	87	49	84

Source: 2017 Sacramento Regional Ozone Plan, Chapter 5, tables 5-1 and 5-2. The sum of the emissions values may not equal the total shown due to rounding of the numbers.

Future emissions forecasts in the 2017 Sacramento Regional Ozone Plan, particularly on-road mobile source emissions, are based primarily on demographic and economic growth projections provided by SACOG, the metropolitan planning organization (MPO) for the Sacramento Metro Area, and the MTC, the MPO for Solano County. The Districts and CARB developed stationary and area source control factors in reference to the 2012 base year, and then used the California Emission Projection Analysis Model to project these 2012 baseline inventories to future years.⁴⁹

Following the *South Coast II* decision, CARB submitted the 2018 SIP Update to the EPA to revise, among other things, the RFP demonstration in the 2017 Sacramento Regional Ozone Plan based on a 2011 RFP baseline year (i.e., rather than 2012).⁵⁰ Our analysis of the emissions

⁴⁹ 2017 Sacramento Regional Ozone Plan, Chapter 5, and Appendices A-2 and A-4.

⁵⁰ 2018 SIP Update, Section V (“SIP Elements for the Sacramento Metropolitan Area”), 27–34; and Appendix A, A-15 through A-18.

inventories for the 2011 RFP baseline year and RFP milestone years 2017 and 2020 can be found in section III.E below.

3. The EPA's Review of the State's Submission

We have reviewed the 2012 base year emissions inventory in the 2017 Sacramento Regional Ozone Plan, and the inventory methodologies used by the District and CARB, for consistency with CAA requirements and EPA guidance. First, as required by EPA regulation, we find that the 2012 inventory includes estimates of VOC and NO_x for a typical ozone season weekday and that CARB has provided adequate documentation explaining how the emissions are calculated. Second, we find that the 2012 base year emissions inventory in the 2017 Sacramento Regional Ozone Plan reflects appropriate emissions models and methodologies; therefore, the submitted emissions inventory represents a comprehensive, accurate, and current inventory of actual emissions during that year in the Sacramento Metro Area. Third, we find that selection of year 2012 for the base year emissions inventory is appropriate because it is consistent with the 2011 RFP baseline year (from the 2018 SIP Update) that is derived from a common set of models and methods. Consequently, the EPA is proposing to approve the 2012 emissions inventory in the 2017 Sacramento Regional Ozone Plan as meeting the requirements for a base year inventory set forth in CAA section 182(a)(1) and 40 CFR 51.1115.

With respect to future year baseline projections, we have reviewed the growth and control factors and find them acceptable and conclude that the future baseline emissions projections in the 2017 Sacramento Regional Ozone Plan reflect appropriate calculation methods and the latest planning assumptions. Also, as a general matter, the EPA will approve a SIP revision that takes emissions reduction credit for a control measure only where the EPA has approved the measure as part of the SIP. Thus, to take credit for the emissions reductions from newly adopted or

amended District rules for stationary sources, the related rules must be approved by the EPA into the SIP. The 2017 Sacramento Regional Ozone Plan emissions inventories reflect credit for local VOC and NO_x control measures adopted and submitted to CARB through late 2015 and for the future effects of these currently adopted control measures; no new future local stationary or area source control measures were submitted or credited within the Plan. With respect to mobile sources, the EPA has acted in recent years to approve CARB mobile source regulations into the California SIP.⁵¹ CARB mobile source control measures are reviewed in more detail in Sections III.C and III.D of this action. Based on our review, we find that the future year baseline projections in the 2017 Sacramento Regional Ozone Plan are properly supported by SIP-approved stationary and mobile source measures.

In September 2019 and April 2020, the U.S. Department of Transportation and the EPA published separate final actions concerning the “Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule” (“SAFE rule”) that, among other things, withdrew the EPA’s 2013 waiver of preemption for CARB’s Zero Emissions Vehicle (ZEV) sales mandate and Greenhouse Gas (GHG) standards that are applicable to new model year 2021 through 2025 light-duty vehicles (“SAFE Part 1”), and relaxed federal GHG emissions and fuel economy standards (“SAFE Part 2”).⁵² The future year emissions projections in the 2017 Sacramento Regional Ozone Plan assume implementation of CARB’s entire Advanced Clean Cars (ACC) program including the third generation of Low-Emission Vehicle (“LEV III”) criteria pollutant standards, but also including the ZEV sales mandate and GHG standards. The Plan’s on-road emissions projections

⁵¹ 81 FR 39424 (June 16, 2016), 82 FR 14446 (March 21, 2017), and 83 FR 23232 (May 18, 2018).

⁵² 84 FR 51310 (September 27, 2019) and 85 FR 24174 (April 30, 2020).

for NO_x and VOCs are based on EMFAC2014, the EPA-approved model at the time the Plan was developed, and assumptions concerning implementation of the ACC program. Calculations for other portions of the future year emissions inventories (e.g., the point and area source portions of the inventories) also include assumptions about the continued implementation of the ACC program, which were appropriate when the plan was submitted in 2017.

In response to the EPA's final action on SAFE Part 1, CARB developed adjustment factors for EMFAC to account for criteria pollutant emissions increases associated with the revocation of the ZEV sales mandate waiver.⁵³ CARB's EMFAC off-model adjustment factors are multipliers that are to be applied to gasoline-powered light-duty automobiles, light-duty trucks and medium-duty vehicles modeled by EMFAC2014 (and its more recent EPA-approved update, EMFAC2017). The EPA reviewed CARB's EMFAC off-model adjustment factors and concluded that they are acceptable for use because the effect of their application is more conservative than necessary, and that, therefore, the factors may be used in transportation conformity determinations and SIP development.⁵⁴ We applied the adjustment factors to the relevant light duty gasoline motor vehicle source categories in the relevant years, 2023 – RFP year and 2024 – attainment year, to estimate the VOC and NO_x increases in the Sacramento

⁵³ Letter dated March 5, 2020, from Steven S. Cliff, Deputy Executive Officer, CARB, to Elizabeth Adams, Director, Air and Radiation Division, EPA, Region IX; includes enclosure, "EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicles Rule Part One," November 20, 2019. CARB has determined that additional EMFAC adjustment factors for criteria pollutants are not needed in response to SAFE Part 2; CARB, "EMFAC Off-Model Adjustment Factors for Carbon Dioxide (CO₂) Emissions to Account for the SAFE Vehicles Rule Part One and the Final SAFE Rule," June 26, 2020.

⁵⁴ Letter dated March 12, 2020, from Elizabeth J. Adams, Director, Air and Radiation Division, EPA Region IX, to Steven Cliff, Deputy Executive Officer, CARB.

Metro Area relative to those included in the Plan and found that the emissions increases were so small as to be negligible.⁵⁵

SAFE Parts 1 and 2 could result in a higher level of gasoline production, transport, and usage, with associated upstream emissions, than had been assumed for the Plan. We believe, however, that the incremental increase in upstream impacts would be limited between now and 2024, the last year addressed in this Plan. Moreover, the relevant source categories that may be affected by increased gasoline production, transport, and usage: oil and gas production (combustion), and petroleum production and marketing, collectively represent only 5.6 percent of the area's projected VOC emissions estimates and 0.02 percent of the area's projected NO_x emissions estimates for the relevant years.⁵⁶ As such, the anticipated small incremental increase in emissions from these upstream sources due to higher-than-expected gasoline consumption in the wake of SAFE Part 1 and SAFE Part 2 would be inconsequential from the standpoint of the RFP and attainment demonstrations in the Plan. Therefore, we find that the regulatory changes established by the SAFE Part 1 and Part 2 final rules do not undermine the RFP and attainment demonstrations in the Sacramento Metro Area Ozone SIP.

B. Emissions Statement

1. Statutory and Regulatory Requirements

⁵⁵ We estimated SAFE rule effects as follows: 2023 VOC and NO_x emissions increase 0.0115 and 0.0026 tons per day, respectively; 2024 VOC and NO_x emissions increase 0.0189 and 0.0047 tons per day, respectively.

⁵⁶ Total petroleum production and marketing VOC and NO_x emissions in the Sacramento Metro Area are estimated as follows: 4.72 tpd and 0.01 tpd in 2023, respectively; and, 4.62 tpd and 0.01 tpd in 2024, respectively. Total VOC and NO_x emissions in the Sacramento Metro Area are estimated as follows: 83.46 and 48.25 in 2023, respectively; and, 82.86 and 46.53, respectively. 2018 SIP Update, A-15 to A-18.

Section 182(a)(3)(B)(i) of the Act requires states to submit a SIP revision requiring owners or operators of stationary sources of VOC or NO_x to provide the state with statements of actual emissions from such sources. Statements must be submitted at least every year and must contain a certification that the information contained in the statement is accurate to the best knowledge of the individual certifying the statement. Section 182(a)(3)(B)(ii) of the Act allows states to waive the emissions statement requirement for any class or category of stationary sources that emit less than 25 tons per year (tpy) of VOC or NO_x, if the state provides an inventory of emissions from such class or category of sources as part of the base year or periodic inventories required under CAA sections 182(a)(1) and 182(a)(3)(A), based on the use of emission factors established by the EPA or other methods acceptable to the EPA.

The preamble of the 2008 Ozone SRR states that if an area has a previously approved emissions statement rule for the 1997 ozone NAAQS or the 1-hour ozone NAAQS that covers all portions of the nonattainment area for the 2008 ozone NAAQS, such rule should be sufficient for purposes of the emissions statement requirement for the 2008 ozone NAAQS.⁵⁷ The state should review the existing rule to ensure it is adequate and, if so, may rely on it to meet the emissions statement requirement for the 2008 ozone NAAQS. Where an existing emissions statement requirement is still adequate to meet the requirements of this rule, states can provide the rationale for that determination to the EPA in a written statement in the SIP to meet this requirement. States should identify the various requirements and how each is met by the existing emissions

⁵⁷ 80 FR 12264, 12291 (March 6, 2015).

statement program. Where an emissions statement requirement is modified for any reason, a state must provide the revision to the emissions statement as part of its SIP.

2. Summary of the State's Submission

The Districts in the Sacramento Metro Area have adopted and CARB has submitted emissions statement rules for incorporation into the California SIP. The EPA has reviewed and approved into the SIP the rules listed in Table 3.

Table 3 – EPA-Approved Emissions Statement Rules for the Sacramento Metro Area		
District	Rule Number and Name	EPA Approval Date and Cite
SMAQMD	Rule 105, Emission Statements	73 FR 32240, June 6, 2008
EDCAQMD	Rule 1000, Emission Statement	69 FR 29880, May 26, 2004
FRAQMD	Rule 4.8, Further Information	69 FR 29880, May 26, 2004
YSAQMD	Rule 3.18, Emission Statements	69 FR 29880, May 26, 2004
PCAPCD	Rule 503, Emission Statement	77 FR 72968, December 7, 2012

The CARB Staff Report submitted with the 2017 Sacramento Regional Ozone Plan certified the submittal and EPA approval of the Districts' emissions statement rules and their applicability to the area.⁵⁸ CARB certified that these emissions statement rules are applicable to the area and the 75 ppb ozone standard because the nonattainment area boundaries have not changed since the EPA's approval of these rules and the reporting thresholds within the rules are appropriate.

3. The EPA's Review of the State's Submission

⁵⁸ CARB Staff Report, 7. The CARB Staff Report cites a June 6, 2006 rulemaking for SMAQMD Rule 105; while the *Federal Register* citation is correct, the correct date is June 6, 2008. The EPA's 2012 approval of PCAPCD Rule 503 provided in Table 3 is not cited by CARB.

As noted above, the EPA has reviewed and approved the Districts' emissions statement rules as meeting the requirements of section 182(a)(3)(B) and incorporated them into the SIP. Also, although the emissions reporting requirements in these rules do not apply to permitted sources of emissions less than 10 or 25 tpy (depending on the subject rule), we note that such an exclusion is allowed under CAA section 182(a)(3)(B)(ii), so long as the state includes estimates of such class or category of stationary sources in base year emissions inventories and periodic inventories, submitted under CAA sections 182(a)(1) and 182(a)(3)(A), based on EPA emission factors or other methods acceptable to the EPA. The EPA has routinely approved emissions inventories developed by the Districts and CARB for the Sacramento Metro Area that include actual emissions estimates for all stationary sources or classes or categories of such sources, including those emitting less than the reporting thresholds within these emissions statement rules, and that such inventories provide the basis for inventories submitted to meet the requirements of CAA sections 182(a)(1) and 182(a)(3)(A). Most recently, we approved the base year emissions inventory for the 1997 8-hour ozone NAAQS on January 29, 2015.⁵⁹ Similarly, we are proposing approval of the base year inventory for the 2008 ozone NAAQS, as noted in the previous section. Therefore, for the reasons described above, we propose to approve the 2017 Sacramento Regional Ozone Plan as meeting the emissions statement requirements under CAA section 182(a)(3)(B).

C. Reasonably Available Control Measures Demonstration

1. Statutory and Regulatory Requirements

⁵⁹ 80 FR 4795.

CAA section 172(c)(1) requires that each attainment plan provide for the implementation of all RACM as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through implementation of reasonably available control technology (RACT)) and for attainment of the NAAQS. For each nonattainment area required to submit an attainment demonstration, the 2008 Ozone SRR requires that the state concurrently submit a SIP revision showing that it has adopted all RACM necessary to demonstrate attainment as expeditiously as practicable and to meet any RFP requirements.⁶⁰

The EPA has provided guidance interpreting the RACM requirement in the General Preamble for the Implementation of the Clean Air Act Amendments of 1990 (“General Preamble”) and in a memorandum entitled “Guidance on the Reasonably Available Control Measure Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas.”⁶¹ In short, to address the requirement to adopt all RACM, states should consider all potentially reasonable control measures for source categories in the nonattainment area to determine whether they are reasonably available for implementation in that area and whether they would, if implemented individually or collectively, advance the area’s attainment date by one year or more.⁶² Any measures that are necessary to meet these requirements that are not either federally promulgated, or part of the state’s SIP, must be submitted in enforceable form as part of the state’s attainment plan for the area.

⁶⁰ 40 CFR 51.1112(c).

⁶¹ General Preamble, 57 FR 13498, 13560 (April 16, 1992) and memorandum dated November 30, 1999, from John Seitz, Director, OAQPS, to Regional Air Directors, titled “Guidance on the Reasonably Available Control Measure Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas.”

⁶² Id. 44 FR 20372 (April 4, 1979), and memorandum dated December 14, 2000, from John S. Seitz, Director, OAQPS, to Regional Air Directors, titled “Additional Submission on RACM from States with Severe 1-hour Ozone Nonattainment Area SIPs.”

For ozone nonattainment areas classified as “Moderate” or above, CAA section 182(b)(2) also requires implementation of RACT for all major sources of VOC and for each VOC source category for which the EPA has issued a control techniques guideline (CTG). CAA section 182(f) requires that RACT under section 182(b)(2) also apply to major stationary sources of NO_x. In Severe-15 areas, a major source is a stationary source that emits or has the potential to emit at least 25 tpy of VOC or NO_x (see CAA section 182(d) and (f)). CARB has submitted separate SIP revisions to address these requirements for each of the Districts.⁶³ We are not addressing the section 182 RACT requirements in today’s proposed rule.

2. Summary of the State’s Submission

For the 2017 Sacramento Regional Ozone Plan, the Districts, SACOG, and CARB undertook collective and individual processes to identify and evaluate potential RACM that could contribute to expeditious attainment of the 2008 ozone NAAQS in the Sacramento Metro Area. We describe each agency’s evaluation below.

a. The Districts’ RACM Analysis

The Districts’ RACM demonstration for the 2008 ozone NAAQS focuses on stationary and area source controls, and is described in Appendix E (“Reasonably Available Control Measures (RACM) Analysis”) of the 2017 Sacramento Regional Ozone Plan. Appendix E contains summary analyses of all potential control measures for emissions reduction opportunities, as well as their economic and technological feasibility. As a first step in the

⁶³ The EPA fully approved the submissions for EDCAQMD (83 FR 67696, December 31, 2018), FRAQMD (80 FR 38959, July 18, 2015), and PCAPCD (82 FR 38604, August 15, 2017). The EPA has not yet acted on the SMAQMD and YSAQMD submissions.

RACM analysis, the Districts prepared a detailed inventory of emissions sources that emit VOC and NO_x to identify source categories from which emissions reductions would effectively contribute to attainment. Details on the methodology and development of this source category and control measure review are discussed in chapter 7 and appendix E of the 2017 Sacramento Regional Ozone Plan.⁶⁴

The Districts' RACM analysis builds upon a foundation of the respective rules developed for earlier ozone plans and approved as part of the SIP, e.g., the Sacramento 8-Hour Ozone Attainment Plan for the 1997 8-hour ozone standard. The Districts' rules listed in Tables E-1 to E-5 of the 2017 Sacramento Regional Ozone Plan establish emissions limits or other types of emissions controls for a wide range of sources, including use of solvents, refineries, gasoline storage, architectural coatings, spray booths, various types of commercial coatings, boilers, steam generators and process heaters, oil and gas production wells, and many more. These rules have already provided significant and ongoing reductions toward attainment of the 2008 ozone NAAQS by 2024.

To identify all potential RACM, staff from the Districts reviewed multiple sources of control measure information. These sources included past regional ozone plans, rules adopted between January 2006 and July 2013 by other California air quality management districts, the EPA's "RACT/BACT/LAER Clearinghouse,"⁶⁵ CARB's BACT Clearinghouse, the Bay Area AQMD's 2010 Clean Air Plan, the South Coast AQMD's 2012 Air Quality Management Plan,

⁶⁴ 2017 Sacramento Regional Ozone Plan, Appendix E provides the overall discussion, while tables E-1 through E-5 list the Districts' rules that were reviewed for RACM.

⁶⁵ LAER means lowest achievable emission rate. For more information on the RACT/BACT/LAER Clearinghouse, see <https://cfpub.epa.gov/RBLC/index.cfm?action=Home.Home&lang=en>.

and rules from ozone nonattainment areas in other states, such as Houston-Galveston-Brazoria (Texas), Dallas-Fort Worth (Texas), and Baltimore (Maryland). Next, the Districts performed the RACM analyses for the stationary and areawide sources within their jurisdictions. For each potential RACM measure, Districts' staff estimated the emissions inventory, emissions reductions, and cost effectiveness. With this process, the Districts evaluated and analyzed all reasonable control measures that were available to include within the 2017 Sacramento Regional Ozone Plan. The Districts determined that emissions reductions associated with the evaluated control measures would not advance the area's attainment date or RFP because the emission reductions, in total, were either too small or unquantifiable.⁶⁶

As discussed above, the Districts are required to make submittals addressing the CAA section 182(b)(2) requirement to implement RACT for all major sources of VOC and for each VOC source category for which the EPA has issued control techniques guidelines. CAA section 182(f) requires that RACT under section 182(b)(2) also apply to major stationary sources of NO_x. California has submitted the CAA section 182 RACT SIPs from the Districts, and the EPA has approved the submittals from EDCAQMD, FRAQMD, and PCAPCD. The CARB Staff Report, submitted with the 2017 Sacramento Regional Ozone Plan, identified commitments by SMAQMD and YSAQMD to submit or amend rules for several source categories to address the RACT SIP requirement.⁶⁷ As a result, the SMAQMD and YSAQMD adopted or amended the following stationary source rules: SMAQMD Rule 419 ("Miscellaneous Combustion Units");

⁶⁶ 2017 Sacramento Regional Ozone Plan, Appendix E and Tables E-1 through Table E-5. These tables present a list of the individual district rules and control measures evaluated by the Districts and a brief discussion of their respective conclusions for each district rule or source category.

⁶⁷ CARB Staff Report, 9.

SMAQMD Rule 468 (“Plastic Parts”); and YSAQMD Rule 2.29 (“Graphic Arts”). Subsequently, the State submitted these rules to the EPA in 2018 and 2019.⁶⁸ Within the 2017 Sacramento Regional Ozone Plan, the SMAQMD and YSAQMD evaluated these rules and/or the relevant source categories for RACM and found that controls applied to these sources would not individually or collectively advance the attainment date.⁶⁹ The control strategy for the Sacramento Metro Area Ozone SIP, overall, takes credit for emissions reductions from the Districts’ stationary or area source rules adopted or amended before late 2015.⁷⁰ Consequently, any emission reductions after 2015 and associated with the later 2018 amendments to or adoption of these SMAQMD and YSAQMD rules to meet the CAA section 182(b)(2) requirement are not credited or incorporated within the attainment demonstration of the Sacramento Metro Area Ozone SIP. Accordingly, the EPA’s approval of these three rules, submitted in 2018 and 2019, are not required for our proposed action on the Sacramento Metro Area Ozone SIP; however, our review and approval into the SIP of these local rules remain relevant for our action on the submitted RACT SIPs, in accordance with CAA section 182(b)(2).

b. Local Jurisdictions’ RACM Analysis and Transportation Control Measures

The 2017 Sacramento Regional Ozone Plan’s Appendix E-9 (“Sacramento Area Council of Governments (SACOG) Transportation Control Measures Considered”), contains the transportation control measures (TCMs) RACM component for the plan. This analysis was conducted by SACOG, the MPO for the Sacramento Metro Area region. In its initial analysis,

⁶⁸ California submitted these rules to the EPA on the following dates: SMAQMD Rule 419 on August 15, 2018 and January 23, 2019; SMAQMD Rule 468 on May 18, 2018; and YSAQMD Rule 2.29 on August 15, 2018.

⁶⁹ 2017 Sacramento Regional Ozone Plan, Appendix E.4, Table E-1, and Appendix E.8, Table E-5.

⁷⁰ 2017 Sacramento Regional Ozone Plan, 5-11 and 7-12 to 7-14.

SACOG conducted a comprehensive review of implemented TCMs in California and other states, measures and strategies from the Sacramento Region's 2009 Ozone SIP, and statewide and mobile source emissions reduction strategies, and identified almost 100 potential TCM measures. Of these, SACOG selected and analyzed 22 measures that were not already implemented in Sacramento Metro Area. These measures were assessed based on the criteria specified in the 2015 Ozone SRR and the EPA's RACT guidance, such as technical and economic feasibility, enforceability, local applicability, and the measures' ability to provide emission reductions before 2026 to advance attainment of the ozone standard. A summary of SACOG's findings for each measure is provided in Table E-6 of the 2017 Sacramento Regional Ozone Plan. Using the assessment criteria, SACOG concluded that none of the additional 22 measures that they identified were appropriate for implementation. Individual measures were economically infeasible, and when considered together, the 22 measures did not advance attainment of the ozone standard by one year. Based on this comprehensive review of TCM projects, SACOG determined that the TCMs being implemented in the Sacramento Metro Area are inclusive of all RACM.⁷¹

c. CARB's RACM Analysis

CARB's RACM analysis is contained in Appendix E-10 ("California Mobile Source Reasonably Available Control Measures Assessment") of the 2017 Sacramento Regional Ozone Plan. This analysis provides a general description of CARB's existing mobile source programs. A more detailed description of these mobile source control programs, including comprehensive

⁷¹ 2017 Sacramento Regional Ozone Plan, 7-16 and Appendix E-9, E-33.

tables listing on- and off-road mobile source regulatory actions taken by CARB since as early as 1985, is contained in Section 7.2 of the 2017 Sacramento Regional Ozone Plan. Collectively, the Appendix E.10 RACM analysis and Section 7.2 contain CARB's evaluation of mobile source and other statewide control measures that reduce emissions of NO_x and VOC in the Sacramento Metro Area.

Within California, CARB has primary responsibility for reducing emissions in several state-wide source categories, including most new and existing on- and off-road engines and vehicles, motor vehicle fuels, and consumer products. Given the need for substantial emissions reductions from mobile and area sources to meet the NAAQS in California nonattainment areas, CARB has developed stringent control measures for on-road and off-road mobile sources and their related fuels. California has authority under CAA section 209 (subject to a waiver by the EPA) to adopt and implement new emission standards for many categories of on-road vehicles and engines, and new and in-use off-road vehicles and engines.

CARB's mobile source program extends beyond regulations that are subject to the waiver or authorization process set forth in CAA section 209 to include engine standards, gasoline and diesel fuel specifications, and other requirements to control emissions from in-use heavy-duty trucks and buses and many other types of mobile sources. Generally, these regulations have been submitted and approved as revisions to the California SIP.⁷²

⁷² See, e.g., 77 FR 20308 (April 4, 2012), the EPA's approval of standards and other requirements to control emissions from in-use heavy-duty diesel-powered trucks; 75 FR 26653 (May 12, 2010), revisions to the California on-road reformulated gasoline and diesel fuel regulations; and, 75 FR 38023 (July 1, 2010), revisions to the California motor vehicle inspection and maintenance program.

Based on the strength of the measures included in the current statewide mobile source program, and the extensive public process involved in developing that program, CARB concluded that there are no additional RACM that would further advance attainment of the 2008 ozone NAAQS in the Sacramento Metro Area, and as a result, that California's mobile source programs fully meet the RACM requirement.⁷³

3. The EPA's Review of the State's Submission

As described above, collectively, the Districts already implement many rules to reduce VOC and NO_x emissions from stationary and area sources in the Sacramento Metro Area. For the Sacramento Metro Area Ozone SIP, the Districts evaluated a wide range of potentially available measures. We find that the process followed by the Districts and described in the 2017 Sacramento Regional Ozone Plan to identify additional RACM is generally consistent with the EPA's recommendations in the General Preamble, that the Districts' evaluation of potential measures to be appropriate, and that the Districts have provided reasoned justifications that additional measures would not advance attainment. Regarding TCMs, we find that SACOG's process for identifying additional TCM RACM and conclusion that the TCMs being implemented in the Sacramento Metro Area (identified in Section 7.7 and Table E-6 of the 2017 Sacramento Regional Ozone Plan), are inclusive of all TCM RACM that are reasonably justified and supported.

With respect to mobile sources, CARB's current program addresses the full range of mobile sources in the Sacramento Metro Area through regulatory programs for both new and in-

⁷³ 2017 Sacramento Regional Ozone Plan, Appendix E.10, E-37. CARB's 2016 Mobile Source Strategy and the public process they conducted for this submittal is referenced in the appendix at footnote 2, E-34.

use vehicles. We find that the process conducted by CARB, as described in Appendix E.10, was reasonably designed to identify additional available measures within CARB's jurisdiction, and that CARB has adopted those measures that are reasonably available.

Based on our review of these RACM analyses and the Districts' and CARB's adopted rules, we propose to find that there are, at this time, no additional RACM that would further advance attainment of the 2008 ozone NAAQS in the Sacramento Metro Area. For the foregoing reasons, we propose to find that the Sacramento Metro Area Ozone SIP provides for the implementation of all RACM as required by CAA section 172(c)(1) and 40 CFR 51.1112(c).

If finalized, this finding under CAA section 172(c)(1) does not affect the State's and the EPA's continuing obligation under CAA sections 182(b)(2) and (f) and 40 CFR 51.905(a)(1)(ii) to implement RACT on all major sources and all CTG source categories.

D. Attainment Demonstration

1. Statutory and Regulatory Requirements

An attainment demonstration consists of the following: (1) technical analyses, such as base year and future year modeling, to locate and identify sources of emissions that are contributing to violations of the ozone NAAQS within the nonattainment area (i.e., analyses related to the emissions inventory for the nonattainment area and the emissions reductions necessary to attain the standard); (2) a list of adopted measures (including RACT controls) with schedules for implementation and other means and techniques necessary and appropriate for demonstrating RFP and attainment as expeditiously as practicable but no later than the outside attainment date for the area's classification; (3) a RACM analysis; and, (4) contingency measures required under sections 172(c)(9) and 182(c)(9) of the CAA that can be implemented without further action by the state or the EPA to cover emissions shortfalls in RFP plans and failures to

attain.⁷⁴ This subsection of today’s proposed rule addresses the first two components of the attainment demonstration – the technical analyses and a review of adopted measures. Section III.C (“Reasonably Available Control Measures Demonstration”) of this document addresses the RACM component, and section III.G (“Contingency Measures”) addresses the contingency measures component of the attainment demonstration in the Sacramento Metro Area Ozone SIP.

With respect to the technical analyses, section 182(c)(2)(A) of the CAA requires that a plan for an ozone nonattainment area classified Serious or above include a “demonstration that the plan ... will provide for attainment of the ozone [NAAQS] by the applicable attainment date. This attainment demonstration must be based on photochemical grid modeling or any other analytical method determined ... to be at least as effective.” The attainment demonstration predicts future ambient concentrations for comparison to the NAAQS, making use of available information on measured concentrations, meteorology, and current and projected emissions inventories of ozone precursors, including the effect of control measures in the plan.

Areas classified Severe-15 for the 2008 ozone NAAQS must demonstrate attainment as expeditiously as practicable, but no later than 15 years after the effective date of designation as nonattainment. The Sacramento Metro Area was designated nonattainment for the 2008 ozone NAAQS effective July 20, 2012,⁷⁵ and accordingly must demonstrate attainment of the standards by no later than July 20, 2027.⁷⁶ An attainment demonstration must show attainment of the

⁷⁴ 78 FR 34178, 34184 (June 6, 2013), the EPA’s proposed rule for implementing the 2008 ozone NAAQS.

⁷⁵ 77 FR 30088 (May 21, 2012).

⁷⁶ 80 FR 12264 (March 6, 2015).

standards for a full calendar year before the attainment date, so in practice, Severe-15 nonattainment areas must demonstrate attainment no later than 2026.

The EPA's recommended procedures for modeling ozone as part of an attainment demonstration are contained in "Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM_{2.5}, and Regional Haze" ("Modeling Guidance").⁷⁷ The Modeling Guidance includes recommendations for a modeling protocol, model input preparation, model performance evaluation, use of model output for the numerical NAAQS attainment test, and modeling documentation. Air quality modeling is performed using meteorology and emissions from a base year, and the predicted concentrations from this base case modeling are compared to air quality monitoring data from that year to evaluate model performance. Once the model performance is determined to be acceptable, future year emissions are simulated with the model. The relative (or percent) change in modeled concentration due to future emissions reductions provides a relative response factor (RRF). Each monitoring site's RRF is applied to its monitored base year design value to provide the future design value for comparison to the NAAQS. The Modeling Guidance also recommends supplemental air quality analyses, which may be used as part of a weight of evidence (WOE) analysis. A WOE analysis corroborates the attainment

⁷⁷ "Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM_{2.5}, and Regional Haze," EPA 454/R-18-009; available at <https://www.epa.gov/scram/state-implementation-plan-sip-attainment-demonstration-guidance>. See also December 2014 draft of this guidance, available at https://www3.epa.gov/ttn/scram/guidance/guide/Draft-O3-PM-RH-Modeling_Guidance-2014.pdf. The December 2014 draft guidance was available during development of the Plan; the final version differs mainly in organization, and in updates to the regional haze portion and to other document references. Additional EPA modeling guidance can be found in 40 CFR 51 Appendix W, *Guideline on Air Quality Models*, 82 FR 5182 (January 17, 2017); available at <https://www.epa.gov/scram/clean-air-act-permit-modeling-guidance>.

demonstration by considering evidence other than the main air quality modeling attainment test, such as trends and additional monitoring and modeling analyses.

The Modeling Guidance also does not require a particular year to be used as the base year for 8-hour ozone plans.⁷⁸ The Modeling Guidance states that the most recent year of the National Emissions Inventory may be appropriate for use as the base year for modeling, but that other years may be more appropriate when considering meteorology, transport patterns, exceptional events, or other factors that may vary from year to year.⁷⁹ Therefore, the base year used for the attainment demonstration need not be the same year used to meet the requirements for emissions inventories and RFP.

For a more detailed discussion of photochemical modeling guidance recommendations, please see the technical support document (TSD) provided in the docket for this proposal.

With respect to the list of adopted measures, CAA section 172(c)(6) requires that nonattainment area plans include enforceable emissions limitations, and such other control measures, means or techniques (including economic incentives such as fees, marketable permits, and auctions of emission rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to provide for timely attainment of the NAAQS.⁸⁰ Under the 2008 Ozone SRR, all control measures needed for attainment must be implemented no later than the beginning of the attainment year ozone season.⁸¹ The attainment year ozone season is defined as

⁷⁸ Modeling Guidance at section 2.7.1, 35.

⁷⁹ Id.

⁸⁰ See also CAA section 110(a)(2)(A).

⁸¹ 40 CFR 51.1108(d).

the ozone season immediately preceding a nonattainment area's maximum attainment date; in the case of the Sacramento Metro area, the attainment year is 2026.⁸²

2. Summary of the State's Submission

a. Photochemical Modeling

CARB performed the air quality modeling for the Sacramento Metro Area Ozone SIP with assistance from the Districts and has included documentation of this modeling within the 2017 Sacramento Regional Ozone Plan and the CARB Staff Report. The modeling relies on a 2012 base year and projects design values for 2022 and 2026. As discussed below, CARB also included an interpolation of NO_x emissions to estimate the design value in the attainment year 2024. The attainment plan's modeling protocol is in Appendix B-3 of the 2017 Sacramento Regional Ozone Plan and contains all the elements recommended in the Modeling Guidance.

The modeling and modeled attainment demonstration are described in Chapter 6 of the 2017 Sacramento Regional Ozone Plan and in more detail in Appendix B-4, which provides a description of model input preparation procedures and various model configuration options. Appendix B-5 of the 2017 Sacramento Regional Ozone Plan provides the coordinates of the modeling domain and thoroughly describes the development of the modeling emissions inventory, including its chemical speciation, its spatial and temporal allocation, its temperature dependence, and quality assurance procedures. The modeling analysis used version 5 of the Community Multiscale Air Quality (CMAQ) photochemical model developed by the EPA. To prepare meteorological input for CMAQ, CARB used the Weather and Research Forecasting

⁸² 40 CFR 51.1100(h).

model version 3.6 (WRF) from the National Center for Atmospheric Research. The WRF modeling uses routinely available meteorological and air quality data collected during 2012. Those data cover May through September, a period that spans the period of highest ozone concentrations in the Sacramento Metro Area. CMAQ and WRF are both recognized in the Modeling Guidance as technically sound, state-of-the-art models. The areal extent and the horizontal and vertical resolution used in these models were adequate for modeling Sacramento Metro Area ozone.

The WRF meteorological model results and performance statistics are described in Appendix B-4.⁸³ There is a slight underprediction of wind speeds and overprediction of temperatures in the eastern portion of the nonattainment area; but overall, modeled wind speed, temperature and relative humidity all track observations well, as shown in scatter and time series plots. The modeling was able to replicate some important meteorological features such as the bifurcation of the delta breeze from the ocean into northern and southern branches, and afternoon upslope flows in the Sierra Nevada foothills. The 2017 Sacramento Regional Ozone Plan states that the bias and error are relatively small and are comparable to those seen in previous meteorological modeling of central California and cited in the 2017 Sacramento Regional Ozone Plan. In summary, the 2017 Sacramento Regional Ozone Plan's meteorological modeling performance statistics appear satisfactory.

Ozone model performance statistics are described in the 2017 Sacramento Regional Ozone Plan at Appendix B-4.⁸⁴ It includes tables of statistics recommended in the Modeling

⁸³ Appendix B-4, section 3.2, B-125; also, refer to supplemental figures S.1–S.15 at B-166.

⁸⁴ Appendix B-4, section 5.2, B-139; also, refer to supplemental figures S.16–S.69, B-182.

Guidance for 8-hour and 1-hour daily maximum ozone concentrations, for the whole nonattainment area and for three Sacramento Metro Area subregions (i.e., western, central, and eastern. There is a slight negative bias (underprediction) for the central and eastern subregions. Because only the relative response to emissions changes from the modeling is used, note that the underprediction of absolute ozone concentrations does not mean that future concentrations will be underestimated. The 2017 Sacramento Regional Ozone Plan found the statistics to be within the ranges for other modeling applications, at the low end of the distribution for error and bias. The Plan's supplemental figures with hourly time series show generally good performance; although some individual daily ozone peaks are missed, for each site there are days for which the modeled highest concentration is close to the value of the highest observed concentration.

As noted in the 2017 Sacramento Regional Ozone Plan's modeling protocol, the Modeling Guidance recognizes that limited time and resources can constrain the extent of the diagnostic and dynamic evaluation of model performance undertaken.⁸⁵ The 2017 Sacramento Regional Ozone Plan describes a dynamic evaluation⁸⁶ in which model predictions of ozone concentrations for weekdays and weekends were compared to each other and to observed concentrations. This evaluation provides useful information on how well the model simulates the effect of emissions changes, since NO_x emissions are lower on weekends than on weekdays, but otherwise similar. The model-predicted ozone reduction on weekends tends to match the observed ozone reduction; this match lends confidence to the modeling. The modeled weekend

⁸⁵ 2017 Sacramento Regional Ozone Plan, Appendix B-3 ("Modeling Protocol"), B-76; Modeling Guidance, 63.

⁸⁶ See "Diagnostic Evaluation" in Appendix B-4 section 5.2.1, B-146.

response is also consistent with an independent study⁸⁷ that examined the frequency of ozone exceedance days over 2001–2007 and the NO_x emission reductions during the same period. The study concluded the NO_x reductions were effective at reducing ozone throughout the entire Sacramento urban ozone plume (i.e., downwind and northeast of urban Sacramento, within the nonattainment area), which exhibits “NO_x-limited” ozone chemistry except in the urban core, and is expected to transition to NO_x-limited conditions everywhere in the nonattainment area as NO_x emissions continue to decline.⁸⁸ The Plan also contains results of an analysis of weekday and weekend ozone concentrations during the 2000–2014 period. It notes a shift over the years toward lower ozone on weekends, especially after 2010, showing that lower NO_x emissions lead to lower ozone concentrations.⁸⁹ Both the modeling and the observed weekday-weekend trends throughout the Sacramento Metro Area show that ozone responds to NO_x emission reductions, i.e., that ozone formation is NO_x-limited.

After model performance for the 2012 base case was accepted, the model was applied to develop RRFs for the attainment demonstration.⁹⁰ This entailed running the model with the same meteorological inputs as before, but with adjusted emissions inventories to reflect the expected changes between the 2012 base year and the 2022 and 2026 future years. These modeling

⁸⁷ La Franchi et al., “Observations of the temperature dependent response of ozone to NO_x reductions in the Sacramento, CA urban plume,” *Atmospheric Chemistry and Physics*, 11, 6945-6960, doi:10.5194/acp-11-6945-2011, 2011; described in Appendix B, B-150.

⁸⁸ The term “NO_x-limited” can mean either that reducing NO_x emissions decrease ozone (as opposed to increasing it); or that reducing NO_x is much more effective at decreasing ozone than is reducing VOC. Both are true in this case; as discussed below, ambient Sacramento Metro Area ozone responds only weakly to VOC reductions. The NO_x-limited ozone regime in the Sacramento Metro Area is discussed in Plan Appendix B. See, e.g., B-147 through B-150 (comparing weekend-weekday concentrations); B-150 through B-152; B-157 through B-158. The issue is also discussed in the CARB Staff Report Appendix B, B-17 and B-36.

⁸⁹ 2017 Sacramento Regional Ozone Plan, Appendix B, B-149.

⁹⁰ 2017 Sacramento Regional Ozone Plan, section 6.8, 6-10, and Appendix B-4, section 5.3, B-150.

inventories excluded “emissions events which are either random and/or cannot be projected to the future ... wildfires, and events such as the [San Francisco Bay Area] Chevron refinery fire.”⁹¹ The future inventories project the base year with these exclusions into the future by including the effect of economic growth and emissions control measures.

The 2017 Sacramento Regional Ozone Plan carried out the attainment test procedure consistent with the Modeling Guidance. The RRFs were calculated as the ratio of future to base year concentrations; these were then applied to 2012 weighted base year design values for each monitor to arrive at future year design values.⁹² The highest 2022 ozone design value is 75.2 ppb, which occurs at the Folsom Natoma Street site, and just barely meets the level of the 2008 8-hour ozone NAAQS of 0.075 ppm.⁹³ The highest 2026 ozone design value is 70.7 ppb at the same monitoring site, and is well below the NAAQS.

As discussed in chapter 8 of the 2017 Sacramento Regional Ozone Plan, the reduction per year needed from the monitored design value of 83 in 2016 to the projected 75 in 2022 was roughly twice the reduction per year seen during 2010–2016. Given the uncertainty posed by the magnitude of the reductions necessary to reach this level by 2022 relative to the historic rate of reduction, and the fact that 2022 design values would achieve the standard by only a very small margin, the Districts determined that a 2024 attainment year would be more appropriate, while

⁹¹ 2017 Sacramento Regional Ozone Plan, Appendix B-3 (“Modeling Protocol”), B-78; and, Appendix B-5 (“Modeling Emissions Inventory”), B-259. To include the fires in the base year but not the future year would effectively credit the Plan’s control measures with eliminating emissions from the fire.

⁹² 2017 Sacramento Regional Ozone Plan, Table 6-2 and Appendix B-4, Table 13, B-151.

⁹³ The Modeling Guidance recommends that RRFs be applied to the average of three three-year design values centered on the base year, in this case the design values for 2010-2012, 2011-2013, and 2012-2015. This amounts to a 5-year weighted average of individual year 4th high concentrations, centered on the base year of 2012, and so is referred to as a weighted design value. 75.2 ppb is equivalent to 0.0752 ppm, which is truncated to 0.075 ppm according to the data handling conventions of 40 CFR 50 Appendix P.

still representing an ambitious target for expeditious attainment in advance of the statutory outermost deadline for attainment.⁹⁴ Since modeling was not available for year 2024, the plan interpolated between the 2022 and 2026 modeling results, on the basis of projected NO_x emissions. The Plan's discussion of the weekend-weekday differences, described above, notes that the area's ozone formation is NO_x-limited, so NO_x emissions are a reasonable basis for interpolation. The interpolation is a form of a scaling of model results and has been done for previous EPA-approved plans.⁹⁵ The interpolation gives a 2024 design value estimate of 72.1 ppb, corresponding to 0.072 ppm, which is below the 2008 8-hour ozone NAAQS of 0.075 ppm, and therefore demonstrates attainment in 2024.⁹⁶

Finally, the 2017 Sacramento Regional Ozone Plan modeling includes an "Unmonitored Area Analysis" (UAA) to assess whether locations without a monitor are able to reach attainment; the standard attainment test procedure covers only locations with a monitor.⁹⁷ The Modeling Guidance describes a procedure utilizing "gradient adjusted spatial fields," as well as the EPA software used to carry it out.⁹⁸ This procedure uses a form of interpolation, combining monitored concentrations and modeled gradients (modeled changes in concentration with distance from a monitor) to estimate future concentrations at locations without a monitor. The 2017 Sacramento Regional Ozone Plan describes an UAA carried out using software developed

⁹⁴ 2017 Sacramento Regional Ozone Plan, 8-2. Here, the year 2024 is discussed for modeling purposes. As noted earlier, the effective attainment date for a determination of attainment is December 31, 2024 if we approve this attainment demonstration as we propose.

⁹⁵ San Joaquin Valley "phase 2" plan for the 2008 ozone NAAQS, 83 FR 61346 (November 29, 2018), and revisions to the San Joaquin Valley plan for the 1997 ozone NAAQS, 77 FR 12652 (March 1, 2012).

⁹⁶ 2017 Sacramento Regional Ozone Plan, 8-4.

⁹⁷ 2017 Sacramento Regional Ozone Plan, Appendix B-4, section 5.4.

⁹⁸ Modeling Guidance section 4.7.

by CARB and implemented in “R,”⁹⁹ using a procedure virtually the same as that outlined in the Modeling Guidance. The 2017 Sacramento Regional Ozone Plan states that the 2026 results showed concentrations below 70 ppb for all locations except for one grid square at Folsom Lake; the Plan notes that this was likely an artifact of too-low mixing heights, a known problem over water. Because the results are well below the 2008 ozone NAAQS level of 75 ppb, the UAA supports the demonstration that all locations in the Sacramento Metro Area will attain the NAAQS by 2024.

In addition to the formal attainment demonstration, the plan also contains a WOE analysis within Appendix B to the CARB Staff Report. It mainly shows the long-term downward trends that continue through 2015, the latest year available prior to 2017 Sacramento Regional Ozone Plan development. Downward trends are demonstrated for measured ozone concentrations, number of days above the ozone NAAQS, geographic area and population exposed to concentrations above the NAAQS, and emissions of the ozone precursors NO_x and VOC. These all show the substantial air quality progress made in the Sacramento Metro Area and add support to the attainment demonstration for 2024.

The 2017 Sacramento Regional Ozone Plan includes an additional attainment demonstration using “banded” RRFs; the EPA also considers this to be part of the WOE.¹⁰⁰ The banded approach is described more fully in a study cited in the 2017 Sacramento Regional Ozone Plan, and also cited in the Modeling Guideline as an alternative RRF approach.¹⁰¹ The

⁹⁹ The R Project for Statistical Computing, <https://www.r-project.org>.

¹⁰⁰ 2017 Sacramento Regional Ozone Plan Appendix B-4, section 5.5, and Appendix B-3, section 8.2.

¹⁰¹ Modeling Guidance, 103.

banded RRF approach divides ozone concentrations into ranges or bands and computes a specific RRF for each band. This allows different ozone concentrations to respond differently to emission changes, a refinement on the standard approach. In this case, the banded approach increased design values for some monitors and decreased them for others; for Folsom, the site with the highest 2026 design value, the design value decreased from 75.2 ppb to 69.0 ppb. This more refined approach provides corroboration for the attainment demonstration and suggests that the analysis was done conservatively.

b. Control Strategy for Attainment

The control strategy for attainment of the 2008 ozone NAAQS in the 2017 Sacramento Regional Ozone Plan relies primarily on emissions reductions from control measures that have been adopted by the Districts and CARB prior to the submittal of the plan. Local stationary and area source emissions reductions come from baseline (i.e., already-adopted) control measures.¹⁰² Overall, nearly all of the emissions reductions that the control strategy relies upon are expected to come from already-adopted and EPA-approved state on- and off-road mobile source control measures, which are discussed in section III.C of this document.¹⁰³ For the 2008 ozone NAAQS, already-adopted control measures from the Districts and CARB are expected to achieve almost all of the reductions needed from the 2012 base year to attain the 2008 NAAQS in 2024. As tables 4 and 5 show, the vast majority of emissions reductions relied upon by the Plan's control strategy are from the on- and off-road mobile source inventory and can be largely attributed to

¹⁰² 2017 Sacramento Regional Ozone Plan, Sections 7.3, 7.4, and 7.5, 7-12 to 7-14.

¹⁰³ 2017 Sacramento Regional Ozone Plan, Section 7.2, 7-1 to 7-14.

control measures adopted by CARB, subsequently approved by the EPA, and cited in detail in Section III.C.¹⁰⁴

Table 4 - 2012 and 2024 Volatile Organic Compound (VOC) Emissions for the Sacramento Metro Area (summer planning inventory, tpd)				
Source Category	2012	2024	Emissions Difference from 2012 to 2024	Percentage of Total Emission Reductions
Stationary Sources	22	23	+1	-4%
Area Sources	29	31	+2	-8%
On-Road Mobile Sources	34	14	-20	77%
Other Mobile Sources	26	17	-9	35%
Total	110	84	-26	100%

Source: 2017 Sacramento Regional Ozone Plan, Chapter 5, Table 5-1. The sum of the emissions values may not equal the total shown due to rounding. Percentage reductions are calculated against net total of gross reductions.

Table 5 - 2012 and 2024 Oxides of Nitrogen (NO_x) Emissions for the Sacramento Metro Area (summer planning inventory, tpd)				
Source Category	2012	2024	Emissions Difference from 2012 to 2024	Percentage of Total Emission Reductions
Stationary Sources	8	7	-1	2%
Area Sources	3	2	-1	2%
On-Road Mobile Sources	61	19	-42	81%
Other Mobile Sources	30	21	-9	17%
Total	101	49	-52	100%

Source: 2017 Sacramento Regional Ozone Plan, Chapter 5, Table 5-2. The sum of the emissions values may not equal the total shown due to rounding.

c. Attainment Demonstration

Chapter 8 of the Plan describes the attainment demonstration in general terms, including photochemical modeling results, and the process for selecting and demonstrating a 2024 attainment year, while Appendix B to the Plan provides more detail concerning photochemical

¹⁰⁴ 2017 Sacramento Regional Ozone Plan, 5-13, Figures 5-8 and 5-9 show VOC and NO_x emission reductions by source category over time.

modeling. Other aspects of this demonstration are included throughout the Plan, including emissions inventory forecasts included in section 5.5 and the control strategy described in Chapter 7. The WOE analysis in Appendix B to the CARB Staff Report includes additional supporting information to complement the photochemical modeling and to provide context for this attainment demonstration, such as analyses of anthropogenic emission, ambient ozone data, and meteorological analyses. Table 6 below summarizes the attainment demonstration for the 2008 ozone NAAQS by listing the base year (2012) emissions level, the modeled attainment emissions level, and the total reductions that the District and CARB estimate to achieve through baseline control measures and accounting for growth. Baseline measures are expected to reduce base year (2012) emissions of NO_x by 51 percent and VOC emissions by 24 percent by the 2024 attainment year, notwithstanding growth and the emission reduction credit (ERC) balance, and to attain the 2008 ozone NAAQS in the Sacramento Metro Area by 2024, two years ahead of the required attainment year, 2026.

Table 6 - Summary of Sacramento Metro Area 2008 Ozone NAAQS Attainment Demonstration (summer planning inventory, tpd)		
	NO_x	VOC
2012 Base Year Emissions Level (A)	101	110
2024 Modeled Attainment Emissions Level (B)	49	84
Total Reductions Needed from 2012 Base Year Levels to Demonstrate Attainment (A–B)	52	26
Reductions from Baseline (i.e., adopted) Measures, net of growth and excluding ERC balance	52	26
2024 Emissions with Reductions from Baseline Control Strategy (compare to Row B)	49	84
Attainment demonstrated?	Yes	Yes

Notes and sources: 2017 Sacramento Regional Ozone Plan, Figure 5-8 and 5-9, 5-3.

3. The EPA’s Review of the State’s Submission

a. Photochemical Modeling

The interpolation of 2022 and 2026 modeling results to estimate the 2024 design value assumed that only NO_x emissions needed to be considered; it was assumed that small changes in VOC emissions have a negligible effect on ozone. That assumption is supported by the ozone isopleth diagram in the Plan showing the ozone results from modeling various combinations of NO_x and VOC reductions.¹⁰⁵ Its lines of constant ozone are nearly parallel to the VOC axis; that is, ozone is about the same for the whole range of VOC emissions levels, and ozone changes very little with VOC emissions reductions. Conversely, the lines are nearly perpendicular to the NO_x axis, indicating ozone varies strongly with NO_x emissions levels. This illustrates the ozone formation is not just NO_x-limited (responsive to NO_x emissions changes), but also far more sensitive to emissions changes in NO_x than VOC. On a percentage basis, ozone is about 14 times as sensitive to NO_x reductions than to VOC reductions; on a tons per year basis, it is about 24 times as sensitive. Nevertheless, the isopleth diagram shows there is some modeled sensitivity to VOC change, so the EPA used it to estimate a 2024 design value, as an alternative to the Plan's interpolation approach. The methodology used is discussed in the TSD, which applies the modeled sensitivity from the 2026 isopleth diagram to the NO_x and VOC emissions differences between 2026 and 2024, to arrive at an ozone difference between 2026 and 2024. The result was a 2024 design value of 72.7 ppb, about 0.6 ppb higher than the Plan's estimate, but still well below the 75 ppb NAAQS. The difference is due mainly to the different simplifying assumptions used in the two approaches, rather than to the inclusion of the effect of VOC, which by itself resulted in an impact of only 0.03 ppb. The results corroborate the Plan's attainment

¹⁰⁵ Plan Appendix B-4, Figure 16, p.B-158.

demonstration, including the assumption that VOC emissions changes have little effect on ozone concentrations.¹⁰⁶

The modeling shows that existing control measures from CARB and the Districts are sufficient to attain the 2008 8-hour ozone NAAQS by 2024 at all monitoring sites in the Sacramento Metro Area. Because the Plan properly incorporates all modeling and input preparation procedures, tests, and performance analyses called for in the modeling protocol, demonstrates good model performance, and responds to emission changes consistent with observations, the EPA finds that the photochemical modeling is adequate for purposes of supporting the attainment demonstration.

b. Control Strategy for Attainment

As discussed above, the Sacramento Metro Area Ozone SIP relies on state and locally adopted baseline control measures, i.e., already-adopted control measures, to achieve the emissions reductions needed to attain the 2008 ozone NAAQS by 2024. As shown in Tables 4–6 and discussed in Section III.C, the Sacramento Metro Area Ozone SIP relies on these measures to achieve all the emissions reductions needed to attain the 2008 ozone NAAQS by 2024. These baseline measures are approved into the SIP and, as such, are fully creditable within the attainment demonstration analysis. Accordingly, we propose to find that the emissions reductions that are relied on for attainment are creditable and sufficient to provide for attainment.

c. Attainment Demonstration

¹⁰⁶ The relative sensitivity of ozone to NO_x and VOC and the alternative 2024 design value are discussed in “Assessment of Sacramento Metro NAA Conformity Motor Vehicle Emissions Budget Consistency with O₃ NAAQS Attainment,” draft August 7, 2020, EPA Region IX, within the docket for this proposed rulemaking.

The Plan followed the modeling procedures recommended in the EPA's Modeling Guidance and showed excellent performance in simulating observed ozone concentrations in the 2012 base year; the TSD discusses the modeling in detail. Given the extensive discussion of modeling procedures, tests, and performance analyses called for in the modeling protocol, the good model performance, and the model response to emissions changes consistent with observations, the EPA finds that the modeling is adequate for purposes of supporting the attainment demonstration. Based on our review of the Plan and our proposed findings that the photochemical modeling and control strategy are acceptable and demonstrate attainment by the applicable attainment date, we propose to approve the attainment demonstration for the 2008 ozone NAAQS in the Sacramento Metro Area Ozone SIP as meeting the requirements of CAA section 182(c)(2)(A) and 40 CFR 51.1108.

E. Rate of Progress Plan and Reasonable Further Progress Demonstration

1. Statutory and Regulatory Requirements

Requirements for RFP for ozone nonattainment areas are specified in CAA sections 172(c)(2), 182(b)(1), and 182(c)(2)(B). Under CAA section 171(1), RFP is defined as meaning such annual incremental reductions in emissions of the relevant air pollutant as are required under part D ("Plan Requirements for Nonattainment Areas") of the CAA or as may reasonably be required by the EPA for the purpose of ensuring attainment of the applicable NAAQS by the applicable date. CAA section 182(b)(1) specifically requires that ozone nonattainment areas that are classified as Moderate or above demonstrate a 15 percent reduction in VOC between the years of 1990 and 1996. The EPA has typically referred to section 182(b)(1) as the rate of progress (ROP) requirement. For ozone nonattainment areas classified as Serious or higher, section 182(c)(2)(B) requires VOC reductions of at least 3 percent of baseline emissions per

year, averaged over each consecutive 3-year period, beginning 6 years after the baseline year until the attainment date. CAA section 182(c)(2)(B)(ii) allows an amount less than 3 percent of such baseline emissions each year if the state demonstrates to the EPA that the plan includes all measures that can feasibly be implemented in the area in light of technological achievability. Additionally, under CAA section 182(c)(2)(C), a state may substitute NO_x emissions reductions for VOC emissions reductions.

In the 2008 Ozone SRR, the EPA provides that an area classified Moderate or higher will have met the ROP requirements of CAA section 182(b)(1) if the area has a fully approved 15 percent ROP plan for the 1-hour or 1997 8-hour ozone standards, provided the boundaries of the ozone nonattainment areas are the same.¹⁰⁷ For such areas, the EPA interprets the RFP requirements of CAA section 172(c)(2) to require areas classified as Moderate to provide a 15 percent emissions reduction of ozone precursors within 6 years of the baseline year. Areas classified as Serious or higher must meet the RFP requirements of CAA section 182(c)(2)(B) by providing an 18 percent reduction of ozone precursors in the first 6-year period, and an average ozone precursor emissions reduction of 3 percent per year for all remaining 3-year periods thereafter.¹⁰⁸ To meet CAA sections 172(c)(2) and 182(c)(2)(B) RFP requirements, a state may substitute NO_x emissions reductions for VOC reductions.¹⁰⁹

Except as specifically provided in CAA section 182(b)(1)(C), emissions reductions from all SIP-approved, federally promulgated, or otherwise SIP-creditable measures that occur after

¹⁰⁷ 80 FR 12264, 12271 (March 6, 2015).

¹⁰⁸ *Id.*

¹⁰⁹ 40 CFR 51.1110(a)(2)(i)(C) and 40 CFR 51.1110(a)(2)(ii)(B); 80 FR 12264, 12271 (March 6, 2015).

the baseline year are creditable for purposes of demonstrating that the RFP targets are met. Because the EPA has determined that the passage of time has caused the effect of certain exclusions to be de minimis, the RFP demonstration is no longer required to calculate and specifically exclude reductions from measures related to motor vehicle exhaust or evaporative emissions promulgated by January 1, 1990; regulations concerning Reid vapor pressure promulgated by November 15, 1990; measures to correct previous RACT requirements; and, measures required to correct previous inspection and maintenance (I/M) programs.¹¹⁰

The 2008 Ozone SRR requires the RFP baseline year to be the most recent calendar year for which a complete triennial inventory was required to be submitted to the EPA. For the purposes of developing RFP demonstrations for the 2008 ozone NAAQS, the applicable triennial inventory year is 2011. As discussed above, the 2008 Ozone SRR provided states with the opportunity to use an alternative baseline year for RFP,¹¹¹ but this provision was vacated by the D.C. Circuit in the *South Coast II* decision.

2. Summary of the State's Submission

In response to the *South Coast II* decision, CARB developed the 2018 SIP Update, which replaces the RFP portion of the 2017 Sacramento Regional Ozone Plan and includes updated emissions estimates for the RFP baseline year, subsequent milestone years, and the attainment year, and an updated RFP demonstration relying on a 2011 RFP baseline year.¹¹² To develop the 2011 RFP baseline inventory, CARB relied on actual emissions reported from industrial point

¹¹⁰ 40 CFR 51.1110(a)(7).

¹¹¹ 40 CFR 51.1110(b).

¹¹² 2018 SIP Update, Section V.B. Reasonable Further Progress, 28-30.

sources for year 2011 and back-cast emissions from smaller stationary sources and area sources from 2012 to 2011 using the same growth and control factors as was used for the 2017 Sacramento Regional Ozone Plan. To develop the emissions inventories for the RFP milestone years (i.e., 2017, 2020, 2023) and attainment year (i.e., 2024), CARB also relied upon the same growth and control factors as the 2017 Sacramento Regional Ozone Plan. The 2018 SIP Update emissions estimates reflect District rules adopted and submitted to CARB through November 2015 and CARB rules adopted through December 2014.¹¹³

Documentation for the Sacramento Metro Area RFP baseline and milestone emissions inventories is found in the 2018 SIP Update.¹¹⁴ The updated RFP demonstration for the Sacramento Metro Area for the 2008 ozone NAAQS is shown in Table 7. This demonstration calculates future year VOC targets from the 2011 baseline, consistent with CAA 182(c)(2)(B)(i), which requires reductions of “at least 3 percent of baseline emissions each year,” and it substitutes NO_x reductions for VOC reductions beginning in milestone year 2020 to meet VOC emission targets.¹¹⁵ For the Sacramento Metro Area, CARB concludes that the RFP demonstration meets the applicable requirements for each milestone year as well as the attainment year.¹¹⁶

¹¹³ 2018 SIP Update, Appendix A, A-1, A-2.

¹¹⁴ 2018 SIP Update, 27-30, and Appendix A, A-15 through A-18.

¹¹⁵ NO_x substitution is permitted under EPA regulations. See 40 CFR 51.1110(a)(2)(i)(C) and 40 CFR 51.1110(a)(2)(ii)(B); and 80 FR 12264, 12271 (March 6, 2015).

¹¹⁶ In addition to the RFP demonstration in Table 7, CARB provided a clarification including the small rounding additions in the motor vehicle emission budgets to ensure that they are accounted for and that RFP would still be met; email dated August 11, 2020, from Webster Tasat, CARB to Anita Lee, USEPA, including attached RFP demonstration table, in the docket.

Table 7 - RFP Demonstration for the Sacramento Metro Area for the 2008 Ozone NAAQS, summer planning inventory, tpd or percentage (%)					
	VOC				
	2011	2017	2020	2023	2024
Baseline VOC	111.6	91.7	91.3	88.5	87.9
Transportation conformity safety margin*	0	0	0	0	0.5
Baseline + safety margin (VOC)	111.6	91.7	91.3	88.5	88.4
Required change since 2011 (VOC or NO _x), %		18%	27%	36%	39%
Target VOC level		91.5	81.5	71.4	68.1
Apparent shortfall (-)/ surplus (+) in VOC		-0.2	-9.9	-17.0	-20.3
Apparent shortfall (-)/ surplus (+) in VOC, %		-0.1%	-8.8%	-15.3%	-18.2%
VOC shortfall previously provided by NO _x substitution, %		0%	-0.1%	8.8%	15.3%
Actual VOC shortfall (-)/ surplus (+), %		-0.1%	-8.7%	-6.4%	-2.9%
	NO_x				
	2011	2017	2020	2023	2024
Baseline NO _x	107.7	71.7	63.8	52.2	50.5
Transportation conformity safety margin*	0	0	0.4	0.9	1.2
Baseline + safety margin (NO _x)	107.7	71.7	64.2	53.2	51.7
Change in NO _x since 2011, tpd		36.0	43.4	54.5	56.0
Change in NO _x since 2011, %		33.4%	40.3%	50.6%	52.0%
NO _x reductions used for VOC substitution through last milestone year, %		0%	0.1%	8.8%	15.3%
NO _x reductions since 2011 available for VOC substitution in this milestone year, %		33.4%	40.2%	41.8%	36.7%
NO _x reductions since 2011 used for VOC substitution in this milestone year, %		0.1%	8.7%	6.4%	2.9%
NO _x reductions since 2011 surplus after meeting VOC substitution needs in this milestone year, %		33.3%	31.5%	35.3%	33.8%
Total shortfall for RFP		0%	0%	0%	0%
RFP met?		Yes	Yes	Yes	Yes

Source: 2018 SIP Update, Table V-3, and Appendix A, A-15 – A-18. The sum of the emissions values may not equal the total shown due to rounding of the numbers. Baseline emissions for 2020, 2023, and 2024 include 5 tpd VOC and 4 tpd NO_x to account for area ERC banking and accounting.

* We discuss the concept of a safety margin within motor vehicle emissions budgets below in the Section H concerning transportation conformity.

3. The EPA's Review of the State's Submission

In 2015, the EPA approved a 15 percent ROP plan for the Sacramento Metro Area for the 1-hour ozone NAAQS and 1997 8-hour ozone NAAQS,¹¹⁷ and the boundaries of the Sacramento Metro Area for the 2008 ozone NAAQS are the same as the Sacramento Metro Area for the 1997 8-hour ozone NAAQS.¹¹⁸ As a result, the Districts and CARB have met the ROP requirements of CAA section 182(b)(1) for the Sacramento Metro Area and do not need to demonstrate another 15 percent reduction in VOC for this area.

Based on our review of the emissions inventory documentation in the 2017 Sacramento Regional Ozone Plan and 2018 SIP Update, we find that CARB and the Districts have used the most recent planning and activity assumptions, emissions models, and methodologies in developing the RFP baseline and milestone year emissions inventories. Also, as presented in Table 7, we have reviewed the calculations in Table V-3 of the 2018 SIP Update and related clarifications in CARB correspondence and find that the Districts and CARB have used an appropriate calculation method to demonstrate RFP. Similarly, we find that the Districts' use of NO_x substitution is warranted and appropriately implemented based on the NO_x-limited conditions in the Sacramento Metro Area, and the area's greater responsiveness to NO_x emissions reductions relative to VOC emissions reductions. For these reasons, we have determined that the Sacramento Metro Area Ozone SIP demonstrates RFP in each milestone year and the attainment year, consistent with applicable CAA requirements and EPA guidance. Therefore, we propose to approve the RFP demonstration for the Sacramento Metro Area for the

¹¹⁷ 80 FR 4795 (January 29, 2015).

¹¹⁸ See 2017 Sacramento Regional Ozone Plan, 2-8, Figure 2-1.

2008 ozone NAAQS under sections 172(c)(2), 182(b)(1) and 182(c)(2)(B) of the CAA and 40 CFR 51.1110(a)(2)(ii).

F. Transportation Control Strategies and Measures to Offset Emissions Increases from Vehicle Miles Traveled

1. Stationary and Regulatory Requirements

Section 182(d)(1)(A) of the Act requires, in relevant part, a state to submit, for each area classified as Serious or above, a SIP revision that “identifies and adopts specific enforceable transportation control strategies and transportation control measures to offset any growth in emissions from growth in vehicle miles traveled or number of vehicle trips in such area.”¹¹⁹

Herein, we use “VMT” to refer to vehicle miles traveled and refer to the related SIP requirement as the “VMT emissions offset requirement.” In addition, we refer to the SIP revision intended to demonstrate compliance with the VMT emissions offset requirement as the “VMT emissions offset demonstration.”

In *Association of Irrigated Residents v. EPA*, the United States Court of Appeals for the Ninth Circuit (“Court”) ruled that additional transportation control measures are required whenever vehicle emissions are projected to be higher than they would have been had VMT not

¹¹⁹ CAA section 182(d)(1)(A) includes three separate elements. In short, under section 182(d)(1)(A), states are required to adopt transportation control strategies and measures to offset growth in emissions from growth in VMT, and, as necessary, in combination with other emission reduction requirements, to demonstrate RFP and attainment. For more information on the EPA’s interpretation of the three elements of section 182(d)(1)(A), refer to 77 FR 58067, 58068 (September 19, 2012) (proposed withdrawal of approval of South Coast VMT emissions offset demonstrations). In section III.F of this document, we are addressing the first element of CAA section 182(d)(1)(A) (i.e., the VMT emissions offset requirement). In sections III.E and III.D of this document, we are proposing to approve the RFP and attainment demonstrations, respectively, for the 2008 ozone NAAQS in the Sacramento Metro Area, and compliance with the second and third elements of section 182(d)(1)(A) is predicated on final approval of the RFP and attainment demonstrations.

increased, even when aggregate vehicle emissions are actually decreasing.¹²⁰ In response to the Court's decision, in August 2012, the EPA issued a memorandum titled "Implementing Clean Air Act Section 182(d)(1)(A): Transportation Control Measures and Transportation Control Strategies to Offset Growth in Emissions Due to Growth in Vehicle Miles Travelled" (herein referred to as the "August 2012 Guidance").¹²¹

The August 2012 Guidance discusses the meaning of "transportation control strategies" (TCS) and "transportation control measures" (TCM) and recommends that both TCSs and TCMs be included in the calculations made for the purpose of determining the degree to which any hypothetical growth in emissions due to growth in VMT should be offset. Generally, TCS is a broad term that encompasses many types of controls (including, for example, motor vehicle emission limitations, I/M programs, alternative fuel programs, other technology-based measures, and TCMs) that would fit within the regulatory definition of "control strategy."¹²² TCM is defined at 40 CFR 51.100(r) as meaning "any measure that is directed toward reducing emissions of air pollutants from transportation sources," including, but not limited to, those listed in section 108(f) of the CAA. Generally, TCMs refer to programs intended to reduce VMT, number of vehicle trips, or traffic congestion, such as programs for improved public transit, designation of certain lanes for passenger buses and high-occupancy vehicles, and trip reduction ordinances.

¹²⁰ See *Association of Irrigated Residents v. EPA*, 632 F.3d 584, 596-597 (9th Cir. 2011), reprinted as amended on January 27, 2012, 686 F.3d 668, further amended February 13, 2012 ("*Association of Irrigated Residents*").

¹²¹ Memorandum dated August 30, 2012, Karl Simon, Director, Transportation and Climate Division, Office of Transportation and Air Quality, to Carl Edland, Director, Multimedia Planning and Permitting Division, EPA Region 6, and Deborah Jordan, Director, Air Division, EPA Region IX.

¹²² E.g., 40 CFR 51.100(n).

The August 2012 Guidance explains how states may demonstrate that the VMT emissions offset requirement is satisfied in conformance with the Court's ruling. Under the August 2012 Guidance, states would develop one emissions inventory for the base year, and three different emissions inventory scenarios for the attainment year. For the attainment year, two of the scenarios would represent hypothetical emissions that would provide the basis to identify the "growth in emissions" due solely to the growth in VMT, and one would represent projected actual motor vehicle emissions after fully accounting for projected VMT growth and offsetting emissions reductions obtained by all creditable TCSs and TCMs. See the August 2012 Guidance for specific details on how states might conduct the calculations.

The base year on-road VOC emissions should be calculated using VMT in that year, and it should reflect all enforceable TCSs and TCMs in place in the base year. This would include vehicle emissions standards, state and local control programs, such as I/M programs or fuel rules, and any additional implemented TCSs and TCMs that were already required by or credited in the SIP as of that base year.

The first of the emissions calculations for the attainment year would be based on the projected VMT and trips for that year and assume that no new TCSs or TCMs beyond those already credited in the base year inventory have been put in place since the base year. This calculation demonstrates how emissions would hypothetically change if no new TCSs or TCMs were implemented while VMT and trips were allowed to grow at the projected rate from the base year. This estimate would show the potential for an increase in emissions due solely to growth in VMT and trips. This represents a "no action" scenario. Emissions in the attainment year in this scenario may be lower than those in the base year due to the fleet that was on the road in the base year gradually being replaced through fleet turnover; however, provided VMT and/or numbers of

vehicle trips will increase by the attainment year, they would still likely be higher than they would have been assuming VMT had held constant.

The second of the attainment year's emissions calculations would assume that no new TCSs or TCMs beyond those already credited have been put in place since the base year, but it would also assume that there was no growth in VMT and trips between the base year and attainment year. This estimate reflects the hypothetical emissions level that would have occurred if no further TCMs or TCSs had been put in place and if VMT and trip levels had held constant since the base year. Like the "no action" attainment year estimate described above, emissions in the attainment year may be lower than those in the base year due to the fleet that was on the road in the base year gradually being replaced by cleaner vehicles through fleet turnover, but in this case they would not be influenced by any growth in VMT or trips. This emissions estimate would reflect a ceiling on the attainment emissions that should be allowed to occur under the statute as interpreted by the Court because it shows what would happen under a scenario in which no offsetting TCSs or TCMs have yet been put in place and VMT and trips are held constant during the period from the area's base year to its attainment year. This represents a "VMT offset ceiling" scenario. These two hypothetical status quo estimates are necessary steps in identifying the target level of emissions from which states would determine whether further TCMs or TCSs, beyond those that have been adopted and implemented in reality, would need to be adopted and implemented in order to fully offset any increase in emissions due solely to VMT and trips identified in the "no action" scenario.

Finally, the state would present the emissions that are expected to occur in the area's attainment year after taking into account reductions from all enforceable TCSs and TCMs put in place after the baseline year. This estimate would be based on the VMT and trip levels expected

to occur in the attainment year (i.e., the VMT and trip levels from the first estimate) and all of the TCSs and TCMs expected to be in place and for which the SIP will take credit in the area's attainment year, including any TCMs and TCSs put in place since the base year. This represents the "projected actual" attainment year scenario. If this emissions estimate is less than or equal to the emissions ceiling that was established in the second of the attainment year calculations, the TCSs or TCMs for the attainment year would be enough to fully offset the identified hypothetical growth in emissions.

Alternatively, if the estimated projected actual attainment year emissions are still greater than the ceiling which was established in the second of the attainment year emissions calculations, even after accounting for post-baseline year TCSs and TCMs, the state would need to adopt and implement additional TCSs or TCMs to further offset the growth in emissions. The additional TCSs or TCMs would need to bring the actual emissions down to at least the VMT offset ceiling estimated in the second of the attainment year calculations, in order to meet the VMT offset requirement of section 182(d)(1)(A) as interpreted by the Court.

2. Summary of State's Submission

CARB prepared the VMT emissions offset demonstration for the Sacramento Metro Area for the 2008 ozone NAAQS, and the Districts included it in the 2017 Sacramento Regional Ozone Plan as Appendix C ("VMT Offset Demonstration"). In addition to the VMT emissions offset demonstration, the 2017 Sacramento Regional Ozone Plan includes a discussion of the TCSs adopted by CARB since 1990, and a discussion of the TCMs developed by SACOG for the

Sacramento Metro Area region as part of the 2016 MTP/SCS that are subject to timely implementation reporting requirements.¹²³

For the VMT emissions offset demonstration, CARB used EMFAC2014, the latest EPA-approved motor vehicle emissions model for California at the time the plan was produced. The EMFAC2014 model estimates the on-road emissions from two combustion processes (i.e., running exhaust and start exhaust) and four evaporative processes (i.e., hot soak, running losses, diurnal losses, and resting losses). The EMFAC2014 model combines trip based VMT data from the regional transportation planning agency (i.e., SACOG), starts data based on household travel surveys, and vehicle population data from the California Department of Motor Vehicles. These sets of data are combined with corresponding emission rates to calculate emissions.

Emissions from running exhaust, start exhaust, hot soak, and running losses are a function of how much a vehicle is driven. Emissions from these processes are thus directly related to VMT and vehicle trips, and CARB included emissions from them in the calculations that provide the basis for the Sacramento Metro Area VMT emissions offset demonstration. CARB did not include emissions from resting loss and diurnal loss processes in the analysis because such emissions are related to vehicle population, not to VMT or vehicle trips, and thus are not part of “any growth in emissions from growth in vehicle miles traveled or numbers of vehicle trips in such area” under CAA section 182(d)(1)(A).

The Sacramento Metro Area VMT emissions offset demonstration uses 2012 as the “base year.” The base year for VMT emissions offset demonstration purposes should generally be the

¹²³ 2017 Sacramento Regional Ozone Plan, sections 7.2 and 7.6–7.8.

same base year used for nonattainment planning purposes. In section III.A of this document, the EPA is proposing to approve the 2012 base year inventory for the Sacramento Metro Area for the purposes of the 2008 ozone NAAQS, and thus, CARB's selection of 2012 as the base year for the Sacramento Metro Area VMT emissions offset demonstration for the 2008 ozone NAAQS is appropriate.

The Sacramento Metro Area VMT emissions offset demonstration also includes the previously described three different attainment year scenarios (i.e., no action, VMT offset ceiling, and projected actual). The 2017 Sacramento Regional Ozone Plan provides a demonstration of attainment of the 2008 ozone NAAQS in the Sacramento Metro Area by the applicable attainment date, based on the controlled 2024 emissions inventory. As described in section III.D of this document, the EPA is proposing to approve the attainment demonstration for the 2008 ozone NAAQS for the Sacramento Metro Area, and thus, we find CARB's selection of 2024 as the attainment year for the VMT emissions offset demonstration for the 2008 ozone NAAQS to be acceptable.

Table 8 summarizes the relevant distinguishing parameters for each of the emissions scenarios and shows CARB's corresponding VOC emissions estimates for the demonstration for the 2008 ozone NAAQS.

Table 8 - VMT Emissions Offset Inventory Scenarios and Results for 2008 Ozone NAAQS						
Scenario	VMT		Starts		Controls	VOC Emissions
	Year	1000/day	Year	1000/day	Year	tpd
Base Year	2012	60,570	2012	11,739	2012	28
No Action	2024	69,579	2024	11,965	2012	16
VMT Offset Ceiling	2012	60,570	2012	11,739	2012	15
Projected Actual	2024	69,579	2024	11,965	2024	11

Source: 2017 Sacramento Regional Ozone Plan, Appendix C.

For the base year scenario, CARB ran the EMFAC2014 model for the 2012 base year using VMT and starts data corresponding to that year. As shown in Table 8, CARB estimates the Sacramento Metro Area VOC emissions at 28 tpd in 2012.

For the “no action” scenario, CARB first identified the on-road motor vehicle control programs (i.e., TCSs or TCMs) put in place since the base year and incorporated into EMFAC2014 and then ran EMFAC2014 with the VMT and starts data corresponding to the 2024 attainment year without the emissions reductions from the on-road motor vehicle control programs put in place after the base year. Thus, the no action scenario reflects the hypothetical VOC emissions that would occur in the attainment year in the Sacramento Metro Area if CARB had not put in place any additional TCSs or TCMs after 2012. As shown in Table 8, CARB estimates the “no action” Sacramento Metro Area VOC emissions at 16 tpd in 2024.

For the “VMT offset ceiling” scenario, CARB ran the EMFAC2014 model for the attainment years but with VMT and starts data corresponding to base year values. Like the no action scenario, the EMFAC2014 model was adjusted to reflect the VOC emissions levels in the attainment years without the benefits of the post-base-year on-road motor vehicle control programs. Thus, the VMT offset ceiling scenario reflects hypothetical VOC emissions in the

Sacramento Metro Area if CARB had not put in place any TCSs or TCMs after the base year and if there had been no growth in VMT or vehicle trips between the base year and the attainment year.

The hypothetical growth in emissions due to growth in VMT and trips can be determined from the difference between the VOC emissions estimates under the “no action” scenario and the corresponding estimates under the “VMT offset ceiling” scenario. Based on the values in Table 8, the hypothetical growth in emissions due to growth in VMT and trips in the Sacramento Metro Area would have been 1 tpd (i.e., 16 tpd minus 15 tpd). This hypothetical difference establishes the level of VMT growth-caused emissions that need to be offset by the combination of post-baseline year TCMs and TCSs and any necessary additional TCMs and TCSs.

For the “projected actual” scenario calculation, CARB ran the EMFAC2014 model for the attainment year with VMT and starts data at attainment year values and with the full benefits of the relevant post-baseline year motor vehicle control programs. For this scenario, CARB included the emissions benefits from TCSs and TCMs put in place since the base year. The most significant measures reducing VOC emissions during the 2012 to 2024 timeframe include the ACC program, ZEV requirements, and more stringent on-board diagnostics requirements.¹²⁴

As shown in Table 8, the projected actual attainment-year VOC emissions is 11 tpd. CARB then compared this value against the corresponding VMT offset ceiling value to determine whether additional TCMs or TCSs would need to be adopted and implemented in

¹²⁴ Section 7.2 of the 2017 Sacramento Regional Ozone Plan includes a discussion of the State’s transportation control strategies adopted by CARB since 1990. Also, refer to the EPA’s final actions on CARB mobile source SIP submittals at 81 FR 39424 (June 16, 2016), 82 FR 14446 (March 21, 2017), and 83 FR 23232 (May 18, 2018).

order to offset any increase in emissions due solely to VMT and trips. Because the projected actual emissions are less than the corresponding VMT offset ceiling emissions, CARB concluded that the demonstration shows compliance with the VMT emissions offset requirement and that there are sufficient adopted TCSs and TCMs to offset the growth in emissions from the growth in VMT and vehicle trips in the Sacramento Metro Area for the 2008 ozone NAAQS.

3. The EPA's Review of the State's Submission

Based on our review of revised Sacramento Metro Area VMT emissions offset demonstration in Appendix C of the 2017 Sacramento Regional Ozone Plan, we find CARB's analysis to be consistent with the August 2012 Guidance and consistent with the emissions and vehicle activity estimates found elsewhere in the 2017 Sacramento Regional Ozone Plan. We agree that CARB and SACOG have adopted sufficient TCSs and TCMs to offset the growth in emissions from growth in VMT and vehicle trips in the Sacramento Metro Area for the purposes of the 2008 ozone NAAQS. As such, we propose to approve the Sacramento Metro Area VMT emissions offset demonstration element of the Sacramento Metro Area Ozone SIP as meeting the requirements of CAA section 182(d)(1)(A).

G. Contingency Measures

1. Statutory and Regulatory Requirements

Under the CAA, 8-hour ozone nonattainment areas classified under subpart 2 as Moderate or above must include in their SIPs contingency measures consistent with sections 172(c)(9) and 182(c)(9). Contingency measures are additional controls or measures to be implemented in the event the area fails to make RFP or to attain the NAAQS by the attainment date. The SIP should contain trigger mechanisms for the contingency measures, specify a

schedule for implementation, and indicate that the measure will be implemented without significant further action by the state or the EPA.¹²⁵

Neither the CAA nor the EPA's implementing regulations establish a specific level of emissions reductions that implementation of contingency measures must achieve, but the EPA's 2008 Ozone SRR reiterates the EPA's policy that contingency measures should generally provide for emissions reductions approximately equivalent to one year's worth of progress, amounting to reductions of 3 percent of the baseline emissions inventory for the nonattainment area.¹²⁶ Where a failure to attain or meet RFP can be corrected in less than one year, the EPA may accept a proportionally lesser amount sufficient to correct the identified failure.¹²⁷

It has been the EPA's longstanding interpretation of CAA section 172(c)(9) that states may meet the contingency measure requirement by relying on federal measures (e.g., federal mobile source measures based on the incremental turnover of the motor vehicle fleet each year) and local measures already scheduled for implementation that provide emissions reductions in excess of those needed to provide for RFP or expeditious attainment. The key is that the Act requires that contingency measures provide for additional emissions reductions that are not relied on for RFP or attainment and that are not included in the RFP or attainment demonstrations as meeting part of or all the contingency measure requirements. The purpose of contingency measures is to provide continued emissions reductions while a plan is being revised to meet the missed milestone or attainment date.

¹²⁵ 70 FR 71612 (November 29, 2005). Also, see the 2008 Ozone SRR, 80 FR 12264, 12285 (March 6, 2015).

¹²⁶ 80 FR 12264, 12285 (March 6, 2015).

¹²⁷ General Preamble, 57 FR 13498, 13511 (April 16, 1992).

The EPA has approved numerous SIPs under this interpretation—i.e., SIPs that use as contingency measures one or more federal or local measures that are in place and provide reductions that are in excess of the reductions required by the attainment demonstration or RFP plan,¹²⁸ and there is case law supporting the EPA’s interpretation in this regard.¹²⁹ However, in *Bahr v. EPA*, the Ninth Circuit rejected the EPA’s interpretation of CAA section 172(c)(9) as allowing for early implementation of contingency measures.¹³⁰ The Ninth Circuit concluded that contingency measures must take effect at the time the area fails to make RFP or attain by the applicable attainment date, not before.¹³¹ Consequently, within the geographic jurisdiction of the Ninth Circuit, states cannot rely on early-implemented measures to comply with the contingency measure requirements under CAA section 172(c)(9) and 182(c)(9).¹³²

2. Summary of the State’s Submission

The District and CARB had largely prepared the 2017 Sacramento Regional Ozone Plan prior to the *Bahr v. EPA* decision; therefore, the plan relies solely upon surplus emissions reductions from already implemented control measures in the RFP milestone years to

¹²⁸ See, e.g., 62 FR 15844 (April 3, 1997) (direct final rule approving an Indiana ozone SIP revision); 62 FR 66279 (December 18, 1997) (final rule approving an Illinois ozone SIP revision); 66 FR 30811 (June 8, 2001) (direct final rule approving a Rhode Island ozone SIP revision); 66 FR 586 (January 3, 2001) (final rule approving District of Columbia, Maryland, and Virginia ozone SIP revisions); and 66 FR 634 (January 3, 2001) (final rule approving a Connecticut ozone SIP revision).

¹²⁹ See, e.g., *LEAN v. EPA*, 382 F.3d 575 (5th Cir. 2004) (upholding contingency measures that were previously required and implemented where they were in excess of the attainment demonstration and RFP SIP).

¹³⁰ *Bahr v. EPA*, 836 F.3d 1218, 1235-1237 (9th Cir. 2016).

¹³¹ *Id.* at 1235-1237.

¹³² The *Bahr v. EPA* decision involved a challenge to an EPA approval of contingency measures under the general nonattainment area plan provisions for contingency measures in CAA section 172(c)(9), but, given the similarity between the statutory language in section 172(c)(9) and the ozone-specific contingency measure provision in section 182(c)(9), we find that the decision affects how both sections of the Act must be interpreted.

demonstrate compliance with the RFP milestone contingency measure requirements of CAA sections 172(c)(9) and 182(c)(9).¹³³

In the 2018 SIP Update, CARB revised the RFP demonstration for the 2008 ozone NAAQS for the Sacramento Metro Area and recalculated the extent of surplus emission reductions (i.e., surplus to meeting the RFP milestone requirement for a given milestone year) in the milestone years. In light of the *Bahr v. EPA* decision, the 2018 SIP Update, however, does not rely on the surplus or incremental emissions reductions to comply with the contingency measures requirements of sections 172(c)(9) and 182(c)(9) but, to provide context in which to review contingency measures for the 2008 ozone NAAQS, the 2018 SIP Update documents the extent to which future baseline emissions would provide surplus emissions reductions beyond those required to meet applicable RFP milestones. More specifically, the 2018 SIP Update identifies one year's worth of RFP as approximately 3.3 tpd and estimates surplus NO_x reductions as ranging from approximately 35.8 tpd to 38.1 tpd depending upon the given RFP milestone year.¹³⁴

To comply with sections 172(c)(9) and 182(c)(9), as interpreted in the *Bahr v. EPA* decision, a state must develop, adopt and submit a contingency measure to be triggered upon a failure to meet RFP milestones or failure to attain the NAAQS by the applicable attainment date regardless of the extent to which already-implemented measures would achieve surplus emissions reductions beyond those necessary to meet RFP milestones and beyond those predicted to achieve attainment of the NAAQS. Therefore, to fully address the contingency

¹³³ 2017 Sacramento Regional Ozone Plan, 7-18, 8-5 and 12-5.

¹³⁴ 2018 SIP Update, chapter V, tables V-5 and V-6.

measure requirement for the 2008 ozone NAAQS in the Sacramento Metro Area, the Districts have committed to develop, adopt and submit contingency measures to CARB in sufficient time for CARB to submit the contingency measures as a SIP revision to the EPA within 12 months of the EPA's final conditional approval of the contingency measure element of the Sacramento Metro Area Ozone SIP.¹³⁵

The Districts' commitment is to amend or adopt the rules listed below, through the required public review and subsequent District board approval processes, to apply more stringent requirements upon a determination that the Sacramento Metro Area failed to meet an RFP milestone or failed to attain the 2008 ozone NAAQS by the applicable attainment date. The Districts' specific commitments are described below.

- The Districts will amend their respective "Architectural Coatings" rule (i.e., FRAQMD Rule 315, EDAQMD Rule 245, SMAQMD Rule 442, PCAPCD Rule 218, and YSAQMD Rule 2.14) to lower the VOC limit for several coating categories, delete coating categories for non-flats, stains, floor, and other specialty coatings, and establish new VOC content limits for colorants.
- The SMAQMD will adopt a new rule for reducing VOC emissions from liquified petroleum gas transfer and dispensing commensurate with South Coast Air Quality Management District Rule 1177.

¹³⁵ Letter dated May 26, 2020, from the Districts respective Executive Officer or Air Pollution Control Officer, Alberto Ayala-SMAQMD, Dave Johnston-EDCAQMD, Christopher Brown-FRAQMD, Erik White-PCAPCD, Mat Ehrhardt-YSAQMD to Richard Corey, Executive Officer, CARB.

CARB has committed to adopt and submit the revised rules to the EPA within 12 months of the EPA's final conditional approval of the contingency measure element of the Sacramento Metro Area Ozone SIP.¹³⁶ Within its 2018 SIP Update, CARB estimated that nonattainment area VOC and NO_x emissions are expected to be approximately 0.5 and 1.8 tpd, respectively, or 2.3 tpd lower in 2025 than in 2024. Also, in their commitment letter, the Districts estimated the potential additional emission reductions from their contingency measure commitments at 0.6 tpd of VOC.

3. The EPA's Review of the State's Submission

Sections 172(c)(9) and 182(c)(9) require contingency measures to address potential failure to achieve RFP milestones or failure to attain the NAAQS by the applicable attainment date. To evaluate the contingency measure element of the Sacramento Metro Area Ozone SIP, we find it useful to distinguish between contingency measures to address potential failure to achieve RFP milestones ("RFP contingency measures") and contingency measures to address potential failure to attain the NAAQS ("attainment contingency measures").

With respect to the RFP contingency measure requirement, we have reviewed the surplus emissions estimates in each of the RFP milestone years, as shown in the 2018 SIP Update, and find that the calculations are correct. Therefore, we agree that the Sacramento Metro Area Ozone SIP provides surplus emissions reductions well beyond those necessary to demonstrate RFP in all the RFP milestone years. While such surplus emissions reductions in the RFP milestone years do not represent contingency measures themselves, we believe they are relevant in evaluating the

¹³⁶ Letter dated July 7, 2020, from Richard W. Corey, Executive Officer, CARB, to John Busterud, Regional Administrator, EPA Region IX.

adequacy of RFP contingency measures that are submitted (or will be submitted) to meet the requirements of sections 172(c)(9) and 182(c)(9).

In this case, the Districts and CARB have committed to develop, adopt, and submit revised and new rules as an RFP contingency measure within 12 months of our final action on the Sacramento Metro Area Ozone SIP. The specific types of revisions the Districts have committed to make upon an RFP milestone failure (i.e., increasing the stringency of existing requirements and adopting a new rule) comply with the requirements in CAA sections 172(c)(9) and 182(c)(9) because they would be undertaken if the area fails to meet an RFP milestone and would take effect without significant further action by the state or the EPA.

Next, we considered the adequacy of the RFP contingency measure (once adopted and submitted) from the standpoint of the magnitude of emissions reductions the measure would provide if triggered. Neither the CAA nor the EPA's implementing regulations for the ozone NAAQS establish a specific amount of emissions reductions that implementation of contingency measures must achieve, but we generally expect that contingency measures should provide for emissions reductions approximately equivalent to one year's worth of RFP, which, for ozone, amounts to reductions of 3 percent of the baseline emissions inventory for the nonattainment area. For the 2008 ozone NAAQS in the Sacramento Metro Area, one year's worth of RFP is approximately 3.3 tpd of VOC or NO_x reductions.¹³⁷ In their commitment letter, the Districts estimated the potential additional emission reductions from their contingency measure commitments at 0.6 tpd, an amount less than one year's worth of RFP.

¹³⁷ The 2011 baseline for VOC and NO_x is 111.6 tpd and 107.7 tpd, respectively, as shown in tables V-1 of the 2018 SIP Update. Three percent of these baselines is 3.3 tpd of VOC and 3.2 tpd of NO_x.

The 2018 SIP Update, however, provides the larger SIP planning context with which to judge the adequacy of the to-be-submitted District contingency measures by calculating the surplus emissions reductions estimated to be achieved in the RFP milestone years and the year after the attainment year. More specifically, the 2018 SIP Update identified surplus NO_x reductions in the various RFP milestone years for the Sacramento Metro Area. The estimates of surplus NO_x reductions range from 33.9 to 38.1 tpd, depending on the RFP year, and are ten or more times greater than one year's worth of progress (3.2 tpd of NO_x).¹³⁸ The surplus reflects already implemented regulations and is primarily the result of vehicle turnover, which refers to the ongoing replacement by individuals, companies, and government agencies of older, more polluting vehicles and engines with newer vehicles and engines. In light of these surplus NO_x emissions reductions in the RFP milestone years, the emissions reductions from the Districts' contingency measures are adequate to meet the contingency measure requirements of the CAA with respect to RFP milestones, even though the measures by themselves produce fewer emission reductions than what the EPA normally recommends for reductions from such contingency measures.

For attainment contingency measure purposes, we evaluate the emissions reductions from the Districts' contingency measures in the context of the expected reduction in emissions within the Sacramento Metro Area in the year following the attainment year relative to those occurring in the attainment year. Based on the emission inventories in Appendix A to the 2018 SIP Update, we note that nonattainment area VOC and NO_x emissions are expected to be approximately 0.5

¹³⁸ 2018 SIP Update, Table V-6.

and 1.8 tpd, respectively, or 2.3 tpd lower in 2025 than in 2024. When considered together, these baseline measures and the Districts' contingency measures provide for an emissions reduction (2.9 tpd) that is near to, but slightly below, one year's worth of progress (i.e., 3.3 tpd of VOC). Given that the attainment demonstration interpolates a 2024 design value (0.072 ppm) well below the 2008 8-hour ozone NAAQS (0.075 ppm), we project that this amount will be sufficient to correct any failure to attain the 2008 8-hour ozone NAAQS in less than one year from the attainment date; therefore, these estimated emission reductions represent continued progress for purposes of the attainment contingency measure requirements.

For these reasons, we propose to conditionally approve the contingency measures element of the Sacramento Metro Area Ozone SIP, as supplemented by the commitments from the Districts and CARB to adopt and submit additional contingency measures, to meet the contingency measure requirements of CAA sections 172(c)(9) and 182(c)(9). Our proposed approval is conditional because it relies upon commitments to adopt and submit specific enforceable contingency measures (i.e., revised rules with contingent provisions). Conditional approvals are authorized under CAA section 110(k)(4).

H. Motor Vehicle Emissions Budgets for Transportation Conformity

1. Statutory and Regulatory Requirements

Section 176(c) of the CAA requires federal actions in nonattainment and maintenance areas to conform to the SIP's goals of eliminating or reducing the severity and number of violations of the NAAQS and achieving timely attainment of the standards. Conformity to the SIP's goals means that such actions will not: (1) cause or contribute to violations of a NAAQS, (2) worsen the severity of an existing violation, or (3) delay timely attainment of any NAAQS or any interim milestone.

Actions involving Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funding or approval are subject to the EPA's transportation conformity rule, codified at 40 CFR part 93, subpart A. Under this rule, metropolitan planning organizations (MPOs) in nonattainment and maintenance areas coordinate with state and local air quality and transportation agencies, the EPA, the FHWA, and the FTA to demonstrate that an area's regional transportation plans and transportation improvement programs conform to the applicable SIP. This demonstration is typically done by showing that estimated emissions from existing and planned highway and transit systems are less than or equal to the motor vehicle emissions budgets (MVEBs or "budgets") contained in all control strategy SIPs. Budgets are generally established for specific years and specific pollutants or precursors. Ozone plans should identify budgets for on-road emissions of ozone precursors (NO_x and VOC) in the area for each RFP milestone year and, if the plan demonstrates attainment, the attainment year.¹³⁹

For budgets to be approvable, they must meet, at a minimum, the EPA's adequacy criteria at 40 CFR 93.118(e)(4). To meet these requirements, the budgets must be consistent with the attainment and RFP requirements and reflect all the motor vehicle control measures contained in the attainment and RFP demonstrations.¹⁴⁰ Budgets may include a safety margin representing the difference between projected emissions and the total amount of emissions estimated to satisfy any requirements for attainment or RFP.

¹³⁹ 40 CFR 93.102(b)(2)(i).

¹⁴⁰ 40 CFR 93.118(e)(4)(iii), (iv) and (v). For more information on the transportation conformity requirements and applicable policies on MVEBs, please visit our transportation conformity web site at: <http://www.epa.gov/otaq/stateresources/transconf/index.htm>.

The EPA's process for determining adequacy of a budget consists of three basic steps: (1) providing public notification of a SIP submission; (2) providing the public the opportunity to comment on the budget during a public comment period; and (3) making a finding of adequacy or inadequacy.¹⁴¹

2. Summary of the State's Submission

The 2017 Sacramento Regional Ozone Plan includes budgets for the 2018 and 2021 RFP milestone years, and the 2024 attainment year. The budgets for 2018, 2021, and 2024 were derived from the 2012 RFP baseline year and the associated RFP milestone years. Consequently, these budgets are affected by the *South Coast II* decision vacating the alternative baseline year provision; therefore, the EPA has not acted on the budgets.

On December 5, 2018, CARB submitted the 2018 SIP Update, which revises the RFP demonstration consistent with the *South Coast II* decision (i.e., by using a 2011 RFP baseline year) and identifies new VOC and NO_x budgets for the Sacramento Metro Area for each updated RFP milestone year, 2020 and 2023, and for the attainment year, 2024. The budgets in the 2018 SIP Update replace the budgets contained in the 2017 Sacramento Regional Ozone Plan. In the submittal letter for the 2018 SIP Update, CARB requested that the EPA limit the duration of our approval of the budgets in the 2018 SIP Update to last only until the effective date of future EPA adequacy findings for replacement budgets.¹⁴² Subsequent to this request, CARB has decided not to limit the duration of the budgets submitted in the 2018 SIP Update.¹⁴³

¹⁴¹ 40 CFR 93.118(f)(2).

¹⁴² Letter dated December 5, 2018, from Richard Corey, Executive Officer, CARB, to Mike Stoker, Regional Administrator, EPA Region IX.

¹⁴³ Email dated September 9, 2020, from Nesamani Kalandiyur, CARB, to Jerry Wamsley, EPA Region IX.

Like the budgets in the 2017 Sacramento Regional Ozone Plan, the budgets in the 2018 SIP Update were calculated using EMFAC2014, CARB’s latest approved version of the EMFAC model for estimating emissions from on-road vehicles operating in California available at the time the 2018 SIP Update was developed. The 2018 SIP Update budgets are rounded up to the nearest whole number, after adding safety margins in specific years for specific pollutants. The following safety margins have been added to the baseline budgets: 0.5 tpd of VOC in 2024; 0.41 tpd of NO_x in 2020; 0.92 tpd of NO_x in 2020; and 1.17 tpd of NO_x in 2024.¹⁴⁴ These safety margins are included to accommodate increased emissions seen in EMFAC2017, the EMFAC model that will likely be used in future conformity determinations.¹⁴⁵ The conformity budgets for NO_x and VOC in the 2018 SIP Update for the Sacramento Metro Area are provided in Table 9.

Table 9 – Transportation Conformity Motor Vehicle Emissions Budgets for the 2008 Ozone NAAQS in the Sacramento Metro Area (summer planning inventory, tpd)		
Budget Year	VOC	NO_x
2023	15	22
2024	15	21

Source: Table V-4 of the 2018 SIP Update.

The budgets in the 2018 SIP Update reflect VMT estimates from SACOG’s long range 2016 MTP/SCS as updated in the 2017 MTIP–20 Metropolitan Transportation;¹⁴⁶ SACOG also

¹⁴⁴ 2018 SIP Update, 31, Table V-4.

¹⁴⁵ As previously noted, EMFAC2014 is CARB’s model for estimating emissions from on-road vehicles operating in California; 80 FR 77337 (December 14, 2015). We have recently announced the availability of an updated version of EMFAC, referred to as EMFAC2017; 84 FR 41717 (August 15, 2019). For the 2017 Sacramento Regional Ozone Plan and the 2018 SIP Update, EMFAC2014 was the appropriate model to use for SIP development purposes at the time the Plan and update were prepared.

¹⁴⁶ 2018 SIP Update, 31; 2017 Sacramento Regional Ozone Plan, 10-2 – 10-6.

coordinated with the MTC in obtaining and using transportation data for the eastern portion of Solano County that is in the Sacramento Metro Area.¹⁴⁷

3. The EPA's Review of the State's Submission

As part of our review of the approvability of the budgets in the Sacramento Metro Area Ozone SIP, we have evaluated the budgets using our adequacy criteria specified in the transportation conformity rule.¹⁴⁸ We will complete the adequacy review concurrent with our final action on the Sacramento Metro Area Ozone SIP. The EPA is not required under its transportation conformity rule to find budgets adequate prior to our proposing approval of them.¹⁴⁹ Today, the EPA is announcing that the adequacy process for these budgets begins, and the public has 30 days to comment on the budgets presented here and in the Sacramento Metro Area Ozone SIP.¹⁵⁰

As documented in a memorandum included in the docket for this rulemaking, we provisionally conclude that the budgets in the Sacramento Metro Area Ozone SIP meet each adequacy criterion.¹⁵¹ In this memorandum, we evaluated the safety margins and rounding margins that CARB added to the baseline budgets. Given the use of updated travel data in the motor vehicle emissions estimates, the safety margins, and CARB's convention of rounding emissions up to the nearest whole number, there are small differences between the budgets and

¹⁴⁷ 2017 Sacramento Regional Ozone Plan, Sections 10.4 and 10.5. 2018 SIP Update, 31.

¹⁴⁸ 40 CFR 93.118(e)(4) and (5).

¹⁴⁹ Under the transportation conformity regulations, the EPA may review the adequacy of submitted motor vehicle emission budgets simultaneously with the EPA's approval or disapproval of the submitted implementation plan. 40 CFR 93.118(f)(2).

¹⁵⁰ 40 CFR 93.118(f)(2)(i) and (ii).

¹⁵¹ Memorandum dated September 17, 2020, from Jerry Wamsley, Air Planning Office, EPA Region IX, titled "Adequacy Review of Motor Vehicle Emissions Budgets in California's Sacramento Metro Area Ozone SIP for the 2008 National Ambient Air Quality Standard for Ozone."

the planning emissions inventories in the 2018 SIP Update and the 2017 Sacramento Regional Ozone Plan. We examined the potential effect of those differences and found that the inclusion of the small motor vehicle emissions budget increases would still result in demonstrations that show RFP and attainment are met.¹⁵²

While a finding of adequacy and approval are two separate actions, reviewing the budgets for their adequacy against the criteria in the transportation conformity rule informs the EPA's decision to propose our approval of the budgets. We have completed our detailed review of the Sacramento Metro Area Ozone SIP and are proposing herein to approve the attainment and RFP demonstrations in sections III.D and III.E, respectively. We have also reviewed the budgets in the Sacramento Metro Area Ozone SIP and found that they are consistent with the attainment and RFP demonstrations for which we are proposing approval, are based on control measures that have already been adopted and implemented, and meet all other applicable statutory and regulatory requirements including the adequacy criteria in 40 CFR 93.1118(e)(4) and (5). Therefore, we are proposing to approve the 2023 RFP budget and the 2024 RFP/attainment budget in the Sacramento Metro Area Ozone SIP. At the time when we either finalize the adequacy process or approve the budgets for the 2008 ozone NAAQS in the Sacramento Metro Area Ozone SIP, as proposed (whichever occurs first; note that they could also occur

¹⁵² Id. In our Memorandum, we summarize and reference "Assessment of Sacramento Metro NAA Conformity Motor Vehicle Emissions Budget Consistency with O₃ NAAQS Attainment," September 14, 2020, EPA Region IX, which provides the EPA's more detailed discussion and calculations concerning the 2018 SIP Update effects, along with the companion Excel spreadsheet, (Copy of) Sac_O3_scaling_for_Update_MVEB.xlsx; both are in the docket for this rulemaking.

concurrently per 40 CFR 93.118(f)(2)(iii)), they will replace the budgets that we previously found adequate for use in transportation conformity determinations.¹⁵³

I. Other Clean Air Act Requirements Applicable to Severe Ozone Nonattainment Areas

In addition to the SIP requirements discussed in the previous sections, the CAA includes certain other SIP requirements applicable to Severe ozone nonattainment areas, such as the Sacramento Metro Area. We describe these provisions and their current status below.

1. Enhanced Vehicle Inspection and Maintenance Programs

Section 182(c)(3) of the CAA requires states with ozone nonattainment areas classified under subpart 2 as Serious or above to implement an enhanced motor vehicle inspection/maintenance (I/M) program in those areas. The requirements for those programs are provided in CAA section 182(c)(3) and 40 CFR part 51, subpart S.

Consistent with the 2008 Ozone SRR, no new I/M programs are currently required for nonattainment areas for the 2008 ozone NAAQS.¹⁵⁴ The EPA previously approved California's I/M program in the Sacramento Metro Area as meeting the requirements of the CAA and applicable EPA regulations for enhanced I/M programs.¹⁵⁵

2. New Source Review Rules

Section 182(a)(2)(C) of the CAA requires a state to develop SIP revisions containing permit programs for each of its ozone nonattainment areas. The SIP revisions are to include

¹⁵³ On July 25, 2014, we found adequate the 2017 and 2018 budgets from the "Sacramento Regional 8-Hour Ozone Attainment Plan and Reasonable Further Progress Plan," September 26, 2013; 79 FR 46436 (August 8, 2014). This plan and the budgets were approved in January 2015; 80 FR 4795 (January 29, 2015). The budgets are as follows: for VOC, 18 tpd for 2017 and 17 tpd for 2018; and for NO_x, 39 tpd for 2017 and 37 tpd for 2018.

¹⁵⁴ 2008 Ozone SRR, 80 FR 12264, 12283 (March 6, 2015).

¹⁵⁵ 75 FR 38023 (July 1, 2010).

requirements for permits in accordance with CAA sections 172(c)(5) and 173 for the construction and operation of each new or modified major stationary source for VOC and NO_x anywhere in the nonattainment area. The EPA has previously approved the Districts' new source review (NSR) rules into the SIP based on our conclusion that the rules adequately addressed the NSR requirements.¹⁵⁶ We will address the NSR requirements for the 2008 ozone NAAQS in the Sacramento Metro Area in a separate action.

3. Clean Fuels Fleet Program

Sections 182(c)(4)(A) and 246 of the CAA require California to submit to the EPA for approval measures to implement a Clean Fuels Fleet Program in ozone nonattainment areas classified as Serious and above. Section 182(c)(4)(B) of the CAA allows states to opt out of the federal clean-fuel vehicle fleet program by submitting a SIP revision consisting of a program or programs that will result in at least equivalent long-term reductions in ozone precursors and toxic air emissions.

In 1994 CARB submitted a SIP revision to the EPA to opt out of the federal Clean Fuels Fleet Program. The submittal included a demonstration that California's low-emissions vehicle program achieved emissions reductions at least as large as would be achieved by the federal program. The EPA approved the SIP revision to opt out of the federal program on August 27, 1999.¹⁵⁷ There have been no changes to the federal Clean Fuels Fleet Program since the EPA approved the California SIP revision to opt out of the federal program; therefore, no

¹⁵⁶ The Districts' NSR rules were approved by the EPA as follows: EDCAQMD Rule 523, 65 FR 4887 (February 5, 2000); FRAQMD Rule 10.1, 80 FR 60047 (October 5, 2015); PCAPCD Rule 502, 79 FR 58264 (September 29, 2014); SMAQMD Rule 214, 78 FR 53271 (August 29, 2013); and YSAQMD Rule 3.4, 62 FR 36214 (July 7, 1997).

¹⁵⁷ 64 FR 46849 (August 27, 1999).

corresponding changes to the SIP are required. Consequently, we find that the California SIP revision to opt out of the federal program, as approved in 1999, meets the requirements of CAA sections 182(c)(4)(A) and 246 for Sacramento Metro Area for the 2008 ozone NAAQS.

4. Gasoline Vapor Recovery

Section 182(b)(3) of the CAA requires states to submit a SIP revision by November 15, 1992, that requires owners or operators of gasoline dispensing systems to install and operate gasoline vehicle refueling vapor recovery (“Stage II”) systems in ozone nonattainment areas classified as Moderate and above. California’s ozone nonattainment areas implemented Stage II vapor recovery well before the passage of the CAA Amendments of 1990.¹⁵⁸

Section 202(a)(6) of the CAA requires the EPA to promulgate standards requiring motor vehicles to be equipped with onboard refueling vapor recovery (ORVR) systems. The EPA promulgated the first set of ORVR system regulations in 1994 for phased implementation on vehicle manufacturers, and since the end of 2006, essentially all new gasoline-powered light and medium-duty vehicles are ORVR-equipped.¹⁵⁹ Section 202(a)(6) also authorizes the EPA to waive the SIP requirement under CAA section 182(b)(3) for installation of Stage II vapor recovery systems after such time as the EPA determines that ORVR systems are in widespread use throughout the motor vehicle fleet. Effective May 16, 2012, the EPA waived the requirement of CAA section 182(b)(3) for Stage II vapor recovery systems in ozone nonattainment areas

¹⁵⁸ General Preamble, 57 FR 13498, 13514 (April 16, 1992).

¹⁵⁹ 77 FR 28772, 28774 (May 16, 2012).

regardless of classification.¹⁶⁰ Thus, a SIP submittal meeting CAA section 182(b)(3) is not required for the 2008 ozone NAAQS.

While a SIP submittal meeting CAA section 182(b)(3) is not required for the 2008 ozone NAAQS, under California state law (i.e., Health and Safety Code section 41954), CARB is required to adopt procedures and performance standards for controlling gasoline emissions from gasoline marketing operations, including transfer and storage operations. State law also authorizes CARB, in cooperation with local air districts, to certify vapor recovery systems, to identify defective equipment and to develop test methods. CARB has adopted numerous revisions to its vapor recovery program regulations and continues to rely on its vapor recovery program to achieve emissions reductions in ozone nonattainment areas in California.

In the Sacramento Metro Area, the installation and operation of CARB-certified vapor recovery equipment is required and enforced by the respective rules for each of the Districts, which govern gasoline transfer and dispensing, and organic liquid loading. Each of the Districts have adopted such rules, and the EPA has approved these rules into the SIP.¹⁶¹

5. Enhanced Ambient Air Monitoring

Section 182(c)(1) of the CAA requires that all ozone nonattainment areas classified as Serious or above implement measures to enhance and improve monitoring for ambient concentrations of ozone, NO_x, and VOC, and to improve monitoring of emissions of NO_x and

¹⁶⁰ See 40 CFR 51.126(b).

¹⁶¹ EDCAQMD Rule 238, at 66 FR 44974 (August 27, 2001), and Rule 244, at 67 FR 45066 (July 8, 2002); FRAQMD Rule 3.8, at 80 FR 38959 (July 8, 2015); PCAPCD Rule 214, at 80 FR 7345 (February 10, 2015) and Rule 215, at 76 FR 5277 (January 31, 2011); SMAQMD Rule 447, at 64 FR 66393 (November 26, 1999) and Rule 449, at 78 FR 897 (January 7, 2013); and YSAQMD Rule 2.21, at 71 FR 63694 (October 31, 2006), and Rule 2.22, at 81 FR 6763 (February 9, 2016).

VOC. The enhanced monitoring network for ozone is referred to as the photochemical assessment monitoring station (PAMS) network. The EPA promulgated final PAMS regulations on February 12, 1993.¹⁶²

On November 10, 1993, CARB submitted to the EPA a SIP revision addressing the PAMS network for six ozone nonattainment areas in California, including the Sacramento Metro Area, to meet the enhanced monitoring requirements of CAA section 182(c)(1) and the PAMS regulations. The EPA determined that the PAMS SIP revision met all applicable requirements for enhanced monitoring and approved the PAMS submittal into the California SIP.¹⁶³

Prior to 2006, the EPA's ambient air monitoring regulations in 40 CFR part 58 ("Ambient Air Quality Surveillance") set forth specific SIP requirements (see former 40 CFR 52.20). In 2006, the EPA significantly revised and reorganized 40 CFR part 58.¹⁶⁴ Under revised 40 CFR part 58, SIP revisions are no longer required; rather, compliance with EPA monitoring regulations is established through review of required annual monitoring network plans.¹⁶⁵ The 2008 Ozone SRR made no changes to these requirements.¹⁶⁶

The Sacramento Metro Area Ozone SIP does not address specifically the enhanced ambient air monitoring requirement in CAA section 182(c)(1). We note, however, that the ambient monitoring network within the Sacramento Metro Area is described in the SMAQMD's annual monitoring network plan for sites in Sacramento County and in CARB's annual

¹⁶² 58 FR 8452 (February 12, 1993).

¹⁶³ 82 FR 45191 (September 28, 2017).

¹⁶⁴ 71 FR 61236 (October 17, 2006).

¹⁶⁵ 40 CFR 58.2(b) now provides that, "The requirements pertaining to provisions for an air quality surveillance system in the SIP are contained in this part."

¹⁶⁶ The 2008 ozone SRR addresses PAMS-related requirements at 80 FR 12264, 12291 (March 6, 2015).

monitoring network plan for sites outside Sacramento County, including those sites within the other four Sacramento Metro Area districts. These plans are submitted annually to the EPA, and we have approved both the most recent annual monitoring network plan for the SMAQMD (“2019 Annual Monitoring Network Plan”),¹⁶⁷ as well as the most recent annual monitoring network plan for CARB (“Annual Network Plan Covering Monitoring Operations in 25 California Air Districts, July 2019”) with respect to the other four district’s elements.¹⁶⁸ In addition, CARB has fulfilled the requirement under 40 CFR part 58, Appendix D, section 5(h), to submit an Enhanced Monitoring Plan for the Sacramento Metro Area.¹⁶⁹ Based on our review and approval of the SMAQMD and CARB annual monitoring network plans with respect to the Districts and our earlier approval of the PAMS SIP revision, we propose to find that CARB and the Districts meet the enhanced monitoring requirements under CAA section 182(c)(1) for the Sacramento Metro Area with respect to the 2008 ozone NAAQS.

6. CAA Section 185 Fee Program

Sections 182(d)(3) and 185 of the CAA require that the SIP for each Severe and Extreme ozone nonattainment area provide that, if the area fails to attain by its applicable attainment date, each major stationary source of VOC and NO_x located in the area shall pay a fee to the state as a penalty for such failure for each calendar year beginning after the attainment date, until the area

¹⁶⁷ Letter dated March 3, 2020, from Gwen Yoshimura, Manager, Air Quality Analysis Office, EPA Region IX, to Alberto Ayala, Air Pollution Control Officer, Sacramento Metropolitan Air Quality Management District.

¹⁶⁸ Letter dated November 26, 2019, from Gwen Yoshimura, Manager, Air Quality Analysis Office, EPA Region IX, to Ravi Ramalingam, Chief, Consumer Products and Air Quality Assessment Branch, Air Quality Planning and Science Division, CARB.

¹⁶⁹ Letter dated November 25, 2019, from Dr. Michael T. Benjamin, Chief, Air Quality Planning and Science Division, CARB, to Mr. Mike Stoker, Regional Administrator, EPA Region IX.

is redesignated as an attainment area for ozone. States are not yet required to submit a SIP revision that meets the requirements of CAA section 185 for the 2008 ozone NAAQS.¹⁷⁰

IV. Proposed Action

For the reasons discussed in this document, under CAA section 110(k)(3), the EPA is proposing to approve as a revision to the California SIP the following portions of the Sacramento Metro Area Ozone SIP, submitted by CARB on December 18, 2017 and December 5, 2018:

- Base year emissions inventory element in the 2017 Sacramento Regional Ozone Plan as meeting the requirements of CAA sections 172(c)(3) and 182(a)(1) and 40 CFR 51.1115 for the 2008 ozone NAAQS;
- RACM demonstration element in the 2017 Sacramento Regional Ozone Plan as meeting the requirements of CAA section 172(c)(1) and 40 CFR 51.1112(c) for the 2008 ozone NAAQS;
- Attainment demonstration element for the 2008 ozone NAAQS in the 2017 Sacramento Regional Ozone Plan as meeting the requirements of CAA section 182(c)(2)(A) and 40 CFR 51.1108;
- ROP demonstration element in the 2017 Sacramento Regional Ozone Plan as meeting the requirements of CAA 182(b)(1) and 40 CFR 51.1110(a)(2) for the 2008 ozone NAAQS;
- RFP demonstration element in Section V – SIP Elements for the Sacramento Metropolitan Area of the 2018 SIP Update (as clarified) as meeting the requirements of

¹⁷⁰ See 40 CFR 51.1117. For the Sacramento Metro Area, a section 185 SIP revision for the 2008 ozone NAAQS will be due on July 20, 2022.

CAA sections 172(c)(2), 182(b)(1), and 182(c)(2)(B), and 40 CFR 51.1110(a)(2)(ii) for the 2008 ozone NAAQS;

- VMT emissions offset demonstration element in the 2017 Sacramento Regional Ozone Plan as meeting the requirements of CAA section 182(d)(1)(A) and 40 CFR 51.1102 for the 2008 ozone NAAQS;
- Motor vehicle emissions budgets in Section V – SIP Elements for the Sacramento Metropolitan Area of the 2018 SIP Update for the RFP milestone year of 2023, and the attainment year of 2024 (see Table 9) because they are consistent with the RFP and attainment demonstrations for the 2008 ozone NAAQS proposed for approval herein and meet the other criteria in 40 CFR 93.118(e).

We are also proposing to find that the:

- Emissions statement element of the 2017 Sacramento Regional Ozone Plan satisfies the requirements under CAA section 182(a)(3)(B) based on our prior approval of the Districts' emission statement rules;
- Enhanced vehicle inspection and maintenance program in the Sacramento Metro Area meets the requirements of CAA section 182(c)(3) and 40 CFR 51.1102 for the 2008 ozone NAAQS;
- California SIP revision to opt out of the federal Clean Fuels Fleet Program meets the requirements of CAA sections 182(c)(4)(A) and 246 and 40 CFR 51.1102 for the 2008 ozone NAAQS with respect to the Sacramento Metro Area; and
- Enhanced monitoring in the Sacramento Metro Area meets the requirements of CAA section 182(c)(1) and 40 CFR 51.1102 for the 2008 ozone NAAQS.

Lastly, we are proposing, under CAA section 110(k)(4), to approve conditionally the contingency measures element of the Sacramento Metro Area Ozone SIP as meeting the requirements of CAA sections 172(c)(9) and 182(c)(9) for RFP contingency measures. Our proposed approval is based on commitments by the Districts and CARB to supplement the element through submission, as a SIP revision (within one year of final conditional approval action), of new or revised Districts' rules that would amend or adopt specific rules with more stringent requirements sufficient to produce near to one year's RFP if an RFP milestone is not met.

The EPA is soliciting public comments on the issues discussed in this proposed rule. We will accept comments from the public on this proposal for the next 30 days and will consider comments before taking final action.

V. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this proposed action merely proposes to approve, or conditionally approve, state plans as meeting federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this proposed action:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action

because SIP approvals are exempted under Executive Order 12866;

- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- Does not provide the EPA with the discretionary authority to address disproportionate human health or environmental effects with practical, appropriate, and legally permissible methods under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the proposed rule does not have tribal implications and will not

impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Authority: 42 U.S.C. 7401 *et seq.*

Dated: October 10, 2020.

John Busterud,
Regional Administrator,
Region IX.

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